RAILROAD GAZETTE

FRIDAY, OCTOBER 5.

John Cresson Trautwine.

A brief account of the life of this distinguished engineer was published with the notice of his death a few weeks ago. This week we give a portrait of him, and since the first notice appeared we have been able to procure fuller particulars concerning his career, which are given below.

He was born in Philadelphia, March 30, 1810. He exhibited an early fondness for study, especially of natural science and of natural philosophy and its application to the arts.

He attended several good schools in and near Philadelphia, finally that of Mr. Espy, where he devoted special attention to natural philosophy, and became proficient also in drawing and the use of colors.

In 1828 he entered as a student the office of Wm. Strickland, engineer and architect. Among his companions here were Thos. M. Walter (architect of Girard College, Philadelphia and of the United States Capitol at Washington, and Ellwood Morris, since well known as engineer and author. Morris and Trautwine made a practice of taking trips together, examining, measuring and drawing the more important and instructive engineering works which came under their notice, prominent among which was the Columbia or Peter's Island bridge over the Schuylkill near Philadelphia, built for the Columbia Railroad, and still used by the Philadelphia & Reading Railroad. Mr. Trautwine published an illustrated description of this bridge in the *Franklin Institute Journal* of August, 1834.

During his first year with Strickland, and while eighteen years of age, he made a competitive design for the Penn Township (since the Penn National) Bank at Sixth and Vine streets, Philadelphia, and obtained the premium and superintended the erection of the building.

In 1829 he was sent with Morris, by Mr. Strickland, to the Delaware Breakwater as assistant, and remained there during the first year's working season.

In 1831 he was made assistant on the Philadelphia & Columbia (now part of the Pennsylvania) Railroad. He assisted in running the line from Columbia Bridge to Broad street. In 1833 he assisted the late J. Edgar Thomson in a survey for a short canal from Fairmount to the mouth of Mill Creek, West Philadelphia. In 1835 he became Principal Assistant to Strickland, who was then Chief Engineer of the railroad about to be built from Wilmington to Havre de Grace, and which now forms part of the Philadelphia, Wilmington & Baltimore road. Here he first met the late Benj. H. Latrobe, C. E., of Baltimore. The two were afterward, and until Mr. Latrobe's death, intimate friends, and the "Civil Engineers' Pocket-Book" is inscribed to Mr. Latrobe's memory.

In 1836 he was appointed Chief Engineer of the Philadelphia & Trenton Railroad, *vice* Samuel Kneass, resigned. Mr. Trautwine resigned in a few week to become Chief Engineer of the Hiwassee (*not* Hiawassee) Railroad, from Knoxville, Tenn., to the Georgia line. Construction began in 1837. He remained there until 1842. Operations were then stopped by the panic. In 1828 he married a daughter of Jacob Ritter, Jr., of Philadelphia.

He went to Pittsburgh in 1841 with General Jacobs, President of the Hiwassee Railroad, to study the manufacture of iron. After fully posting themselves on the subject they returned to Tennessee in company with Mr. Wm. Firmstone (since of the Glendon Iron Works, near Easton, Pa.), intending to erect in Tennessee iron works in which the railroad company was to have rolled the first rails made in the United States, but the panic came and put a stop to all operations.

In 1841 he surveyed the Ralston & Blossburg Railroad in Pennsylvania. He went to Carthagena, South America, the same year, where he was engaged in the construction of the Canal del Dique connecting the Magdalena River with the Caribbean Sea. He remained there until 1849, and on his return made a survey of the borough of Germantown, Philadelphia. In 1850 he began the final survey of the Panama Railroad. He left in December, some months after construction had begun.

In 1851 he published the first editions of "The Field Practice of Laying out Circular Curves for Railroads," and of "A New Method of Calculating the Cubic Contents of Excavations and Embankments," and made designs for a suspension bridge with four spans of 1,000 ft. each, and two of 500, with wire cables, intended to cross the Delaware River to Camden from Market street, Philadelphia. The spans were to be strengthened with longitudinal trusses 20 ft. deep. He claimed to have been the first to suggest the use of such trusses for this purpose.

In 1852 he made a survey of the Atrato River, South America, in search of an inter-oceanic canal route for light vessels *via* the Atrato and some of the rivers heading in the Western Cordilleras and emptying into the Pacific. The survey occupied four months. He considered the best route to be *via* the Atrato from its mouth, south 80 miles to Vigia Cubarador, thence southwest 60 miles to the Bay of Cupica on the Pacific coast, but even this route he estimated would cost about $325,000,000. An account of this survey was published by him in the *Franklin Institute Journal* in 1854.

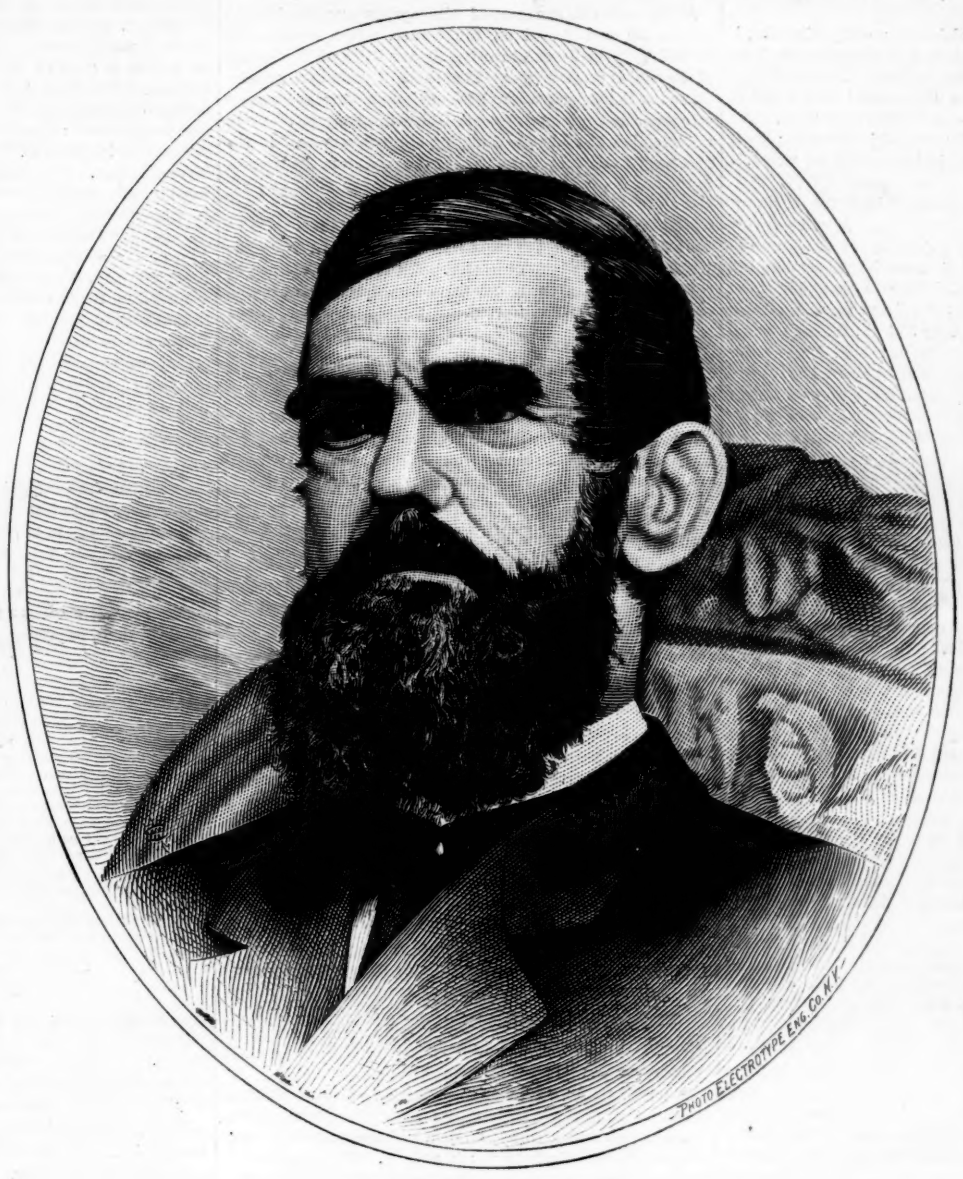
In 1853 he examined and reported upon the harbor of Arecibo, in Porto Rico. He was appointed Engineer of the Coal Run Railroad, near Mount Carmel, Pa., the same year, and remained there until the stoppage of operations in 1855.

In 1854 his right arm was crushed while measuring an iron coal car (then a novelty) at Port Richmond, Philadelphia. In 1856 he made a survey for the Lackawanna & Lanesboro Railroad (now Jefferson Railroad) in the northeastern counties of Pennsylvania.

In 1857 and 1858 he surveyed the Honduras route for an inter-oceanic railroad, 240 miles long.

In 1858 he examined the harbor of Montreal, with reference to the proposed improvement of it and the building of docks, and reported a conservative course.

In 1864 he prepared plans for a harbor at Big Glace Bay, Nova Scotia.



JOHN CRESSON TRAUTWINE.

In 1871 he published the first edition of the "Civil Engineer's Pocket Book," now in the eighth edition (twentieth thousand). From this time on, he was engaged chiefly in the revision and enlargement of his published works. Since the appearance of its first edition, in 1872, and up very nearly to the time of his death, he spent the greater part of his time in keeping himself and the book fully abreast of the age.

Of the seven editions which have since appeared, scarcely one is without some marked change, made with this object. In the third (1874) edition "the 22 pages on the strength of pillars are entirely new, in order to conform to Gordon's rules, which later experience has shown to be more reliable than Hodgkinson's. The new tables from Gordon's rules are entirely original, and are, we believe, the only ones that have yet appeared;" also, "a new barometric table has been deduced from Williamson." A description of the plenum process as used at South street bridge, Philadelphia, in 1872, was also given. In the fifth (1881) Kutter's formula, with remarks by General Ellis, and an original table (based upon it) of velocities in sewers, were added, together with a new illustrated article of several pages on rivets and riveting; besides which "much new matter will be found scattered through the volume." In the sixth (1882) about ten pages, and as many figures were added, including an article on centres, largly based upon original investigations by the author; while in the eighth (of this year) the articles on the engineer's transit and on the laying out of turnouts were entirely re-written and re-illustrated to conform to modern practice; Mr. Eliot C. Clark's tables of strengths of concrete beams and of cement mortar, and Mr. C. L. Gates' table of strength of built iron pillars inserted, and Messrs. Fritz and Sayre's latest improved (Lehigh Valley) splice plate described and illustrated.

He was a mineralogist from childhood. One day, when quite a boy, he walked a long way into the country looking for specimens. When night came on and he failed to return, search was made for him and resulted in finding him sound asleep in a market stall not far from his home, with his minerals, tied up in a handkerchief, doing duty as a pillow. He leaves a very fine collection, arranged with the utmost care. He enjoyed the friendship of Dana, Boush and other eminent mineralogists, and was a member of the Academy of Natural Sciences of Philadelphia, the American Philosophical Society, the Historical Society of Pennsylvania and the Franklin Institute.

He died Friday, Sept. 14, 1883, in the 74th year of his age. The tropical fevers, which had several times prostrated him during his Central American surveys, seem to have undermined his system. For years he has been a sufferer from nervous and physical prostration, which ended in his death. His wife survives him, as do also his two sons, William Trautwine, Conveyancer, and John C. Trautwine, Jr., who assisted his father in the revision of his books, and who continues the work.

Contributions.

Engine Coal Pockets on the Erie.

ELMIRA, N. Y., Sept. 3, 1883.

TO THE EDITOR OF THE RAILROAD GAZETTE:

Among the many problems which the rapid growth of railway transportation has developed, that of delivering coal to engines quickly and with a reasonable degree of economy has, like car-coupling, brought forth a variety of devices which have more or less merit, but which do not as yet meet with sufficient approbation to come into general use.

Although there is not the necessity for it which there is for a universal coupler, still, if thousands of dollars are to be expended in structures from which there are no direct returns, it would be very desirable if some one design should possess sufficient merit of economy in use to render its general adoption only a matter of time.

No such claim is made for the pockets illustrated in this

article; they will serve better for the purpose of showing what different men have thought would best meet the requirements of a popular trunk line, and be of more or less service to those interested in the subject.

All the pockets in use on the Susquehanna Division of the New York, Lake Erie & Western Railroad provide storage for coal in bulk, and deliver it to engines by weight or measure.

The general plan is that of the pockets last built at Waverly, N. Y., under the direction of the present Road-Master, Mr. W. Farnham, who, at the request of Mr. Chanute, Chief Engineer of the road, sent a model of them to the Chicago Exposition of Railway Appliances. The pockets proper have 11 sections of 10 ft. each, giving storage for about 330 tons. The tail-track has six sections of the same length for the accommodation of extra cars. In the approach advantage is taken of a through cut to get a greater part of the necessary elevation from the bank. The line is two curves, radius 764.5 ft., with a tangent of 50 ft. between. The grade is 4 ft. to 100 ft., and on the remainder of the structure 10 in. to 100 ft. The last section of the tail-track is used for a sand-house, and the other sections are for storing surplus coal.

One peculiarity in this plan, although worthy of notice, is of questionable utility; the pockets and tail track on level ground are set on piles, while the approach is stepped up a side slope—the only place where there could be a doubt of the stability of the structure—on little stone piers. The form of the bent makes this still more objectionable; for if either of the side piers settles, the bent is left in unstable equilibrium. See fig. 6.

The cars in which the coal is brought have the ordinary form of 20-ton dumps with hopper bottom. A yard engine runs from four to six up on the pockets at once, where the coal is dumped into the space *A* in the enlarged section, fig. 3. This space has a 3-inch plank bottom and sloping sides. At *B* the bottom has a slope of 33° 42′ and in each section there are two openings about 2 by 3½ ft., through which the coal passes to the measuring pockets below. These openings are closed by iron doors hung on arms about 16 in. long. The doors are raised by levers operated from the walk at *C*. Each section has two measuring pockets of two tons capacity at *D*. The bottom has a slope of 38° 40′, which is also the inclination designed for the aprons over which the coal passes to the engines. A small door *E* hangs from the face of each small pocket, which the weight of the coal forces open when the apron is lowered and its own weight closes when the pocket is empty. It is held in place when the pockets are filled by the apron closing against it. These aprons are of 2-in. plank, hinged at *Y* and counterbalanced by weights attached to chains from each side acting over the pulleys *G* and *H*. The counterbalances are of cast-iron, cylindrical, 5 in. in diameter and 8½ in. long, with an eye in each end. Six of them are linked together so as to form a chain of weights, one end of which is attached to the chain from one apron and the other end to the chain from the adjacent apron. When the aprons are closed these weights hang in the form of a loop between the aprons, and when an apron is lowered they are drawn up so that all the weights attached to it are acting on it as counterbalance. A stop on one chain from each apron acting against a bracket at *K* prevents the aprons from falling too far, and a hook with staples for each apron prevents the adjacent aprons from falling when one is lowered.

New pockets were built at Hornellsville in 1881 and 1882 from a design by Mr. Ferguson. The general plan differs from the others by using a stationary engine and cable to draw the cars up the incline to the pockets. The bottom of the space *A* for storage has the form of the letter W, with openings at the lower apices, through which the coal passes to the measuring pockets. The aprons have separate counterbalances, and coal is taken from both sides of the pockets, which are similar to those of Waverly in their operation.

Figures 8 and 9 show the details of the pockets in use at Southport, N. Y. The coal is stored at *A*, as in the others, and there are three measuring pockets of two tons capacity in each section. The doors at *E* are hinged at the top and held in place by a rod from the lower edge to a pin in the beam at *M* so that the delivery of coal is controlled independently of the action of the aprons. Nearly all the coal is shoveled into the small pockets, although some runs over when the space for storage is full. The approach is filled in with coal—a reserve for temporary supply in case of emergency.

Figs. 7, 10 and 11 show the construction of the old pockets at Waverly, N. Y. The bottom of the space for storage is similar to that of the new pockets. From it the coal was loaded in wagons and weighed, then shifted by means of a turn-table on the platform of the scales, run out and dumped into the tender.

Fig. 13 shows a section of the pockets at Susquehanna, Pa. Wagons or cars are used here as in the old pockets at Waverly, but of a different form; they have hopper bottoms and hold two tons each.

To deliver coal, a platform counterbalanced, and hinged at *X*, is lowered over the tender and a car run out and dumped. The platform has chains attached to the outer end and to the timbers above, which prevents its dropping when loaded. It is raised and lowered by a hand-wheel and friction pulleys, around which the chains from the counterbalances are passed. The iron doors at *O* and *P* are raised and lowered by a windlass and wheel instead of levers as in the others, and I like it better.

Taking an average for the months of March, April, May, June and July of the current year, we have 675 tons of coal per month delivered to engines at Susquehanna for each man employed there, at a cost of $6.55 per 100 tons; 614 tons per man at Hornellsville at $7.08 per 100 tons, and 560 tons per man at $7.85 per 100 tons at Southport; for the new pockets at Waverly in May, June and July, 460 tons per man at $9.07 per 100 tons, and for the old pockets there 455 tons per man at $9.16 per 100 tons, during the month of March. This is hardly a fair comparison of the merits of these pockets without an explanation of the circumstances which materially effect the labor and expense at each place, and which are not due to the difference in the design.

At Southport the coal is dumped from the cars into the pockets by the company furnishing the coal, which is not done at any other place. This is to a certain extent balanced by one man spending some time each day at other work. If the labor of dumping the coal from the cars were included, I am inclined to think the expense would be greater.

At Waverly and Hornellsville there is a sand-house attached, and the labor attending its use is included in the expense of the pockets there, and at Hornellsville there is the additional expense of the care and use of a stationary engine. These items effect the comparative expense unfavorably at both places.

At Hornellsville the ends of the aprons are too low to clear a full load of coal on the tender, which necessitates shoveling the ends out or raising them a little while the last of the coal is passing over. The same is true to a greater extent at Southport, where both coal and time are wasted whenever an engine takes coal. The old pockets at Waverly were too low to make the dumping of much service. It was necessary to shovel a large part of the coal from the wagons to the engine, which materially effected the time and expense of taking coal. The aprons on the new pockets there were also too low, but by placing the stops on the chains so that the ends of the aprons are held at 11½ ft. from the base of rail it has been overcome. The coal does not run as freely over the aprons as at first, but the time of taking coal is not materially affected. It usually requires from 1 to 1½ minutes for each two tons taken, from the time an engine stops until it starts again. At Susquehanna and Hornellsville the time usually occupied is about the same; at Southport about twice as long and at the old pockets at Waverly over three times as long.

Several years before the old pockets at Waverly had become unfit for use the beams which support the track-stringers became unsafe, and it was necessary to place posts directly under the stringers. To avoid this in the new pockets the posts which carry the track were placed directly under the stringers. This is unquestionably the best place for them, but they interfere with the free running of the coal. When a section is full of coal about five tons will run out by simply raising the iron doors, leaving a space in the coal between bents, similar to an inverted cone. The coal back of that must be shoveled out. Whenever the supply permits more coal is dumped in from the cars above and the labor of shoveling avoided. If the bents were 12 ft. on centres and coal were taken from both sides this difficulty would be practically removed.

In filling the measuring pockets here something over a ton of coal will run out in a heap directly under the iron doors. This must be moved forward by hand before more coal can be let down. In case the coal is shoveled from the back of the space *A*, the operator props the iron door up and shovels till the opening is full; then he gets out and levels it off in the measuring pockets. When this is repeated two or three times to fill a pocket, much time is consumed climbing in and out. In the Hornellsville pockets, where the face of the measuring pockets is vertical, no such difficulty is encountered. Some shoveling would also have been saved if a space had been left between the walks on the pockets and the track to allow the coal which runs over the stringers in dumping from the cars to drop into the pockets, and save cleaning up after each car. Such a space is provided in the old pockets at Waverly and in those at Susquehanna.

Two-inch planks for aprons necessitates a large amount of extra iron in the counterbalances. The aprons at the Southport pockets are of ⅞-in. oak, and the counterbalances have about one-sixth as much weight. No complaint is made of their frailty, and they seem to give better satisfaction, being lighter to handle. A better plan would be to make the aprons of No. 11 or 12 wrought-iron.

Our engines generally take from two to six tons of coal at once, and it would have been well if some of the measuring pockets had been made to hold four tons instead of uniformly two.

One great objection to storing coal in bulk is the labor required to move it after a freeze. After a thaw and freeze, at each of these pockets it is necessary to loosen the coal with a pick, and when a large amount is in store there is almost, if not quite, as much labor required to do this as to mine it at first.

There is always more or less water or snow and ice in coal in the winter season here, and the less the quantity of coal remaining in any one pocket long enough for it to freeze, the less will be the labor necessary to get that pocket ready for use. The elevation necessary to make these pockets economical in use adds materially to their first cost, as every foot added to the height of the pockets adds from 20 to 25 ft. to the length of the approach at the point where it is most expensive to build, in addition to the expense of the higher structure. The space for storing coal takes from 6 to 10 ft. in height, and adds from 150 to 250 ft. to the length of the approach. The approach can be shortened by a steeper incline and stationary engine, as at Hornellsville, but the added expense of engine, cables, drums, etc., more than equals the expense of the lesser grade, if the location is at all favorable, while there is the added danger and expense of runaway cars.

A sufficient number of measuring pockets must be provided at any station to meet any immediate demand for coal, and a design which would allow dumping the coal from the cars direct to the measuring pockets would diminish the first cost of the structure and save moving the coal at once. Although there are some imperfections in these pockets there are many points in their favor. The time of taking coal is reduced nearly to a minimum, which is very desirable at all stations, except possibly a terminus where engines are frequently idle for some time. The principle involved in their design of storing coal in pockets whose capacity is adapted to that of the engines which take coal from them, at a sufficient elevation for it to run by gravity to the engines, seems best adapted to the requirements of a pocket for general use. O. DOCKSTADER.

The Lead-Lined Journal Box Patent.

NEW YORK, Sept 29, 1883.

TO THE EDITOR OF THE RAILROAD GAZETTE:

In your number of Sept. 28, 1883, you do the undersigned injustice, and, as we well know you have no other interest than to give the public information concerning the facts of the matter, we herewith present to you the actual facts in the controversy between Hopkins and Le Roy; that is to say, we inclose a copy of the decision of the Commissioner of Patents, dated Sept. 1, 1883, in the matter of the interference of Hopkins *vs.* Le Roy. The history of that litigation is as follows: The interference was originally declared in favor of Hopkins *vs.* Le Roy, as the title of the proceedings will show. The interference was sustained, but was substantially modified by the Board of Examiners (a copy of whose decision is herewith inclosed), the modification consisting in the declaration that no ground for an interference or for a declaration of interference existed. The Le Roy Company, being dissatisfied with this decision, further appealed to the Commissioner of Patents, and by reference to the decision you will see that every claim made by Le Roy has been sustained, the interference dissolved and every claim, as we contend, made by Mr. Hopkins has been practically dissolved, because the Commissioner decides that the claims of the respective inventors should be made to cover their inventions, and not their *functions*. We, therefore, respectfully submit that you are in error when you say in the edition of your paper above referred to, "But the broad claim of Hopkins upon which priority of invention is awarded to him seems to cover the case, and leaves him substantially in command of the field"—the fact being that, as Hopkins was the aggressive party (Le Roy being upon the defensive), and the decision of the Commissioner awarding to Le Roy all that he has ever claimed, that decision rather leaves Le Roy the victor and in command of the field, than, as you say, Hopkins.

GEORGE W. MCLEAN,
President Le Roy Journal Box Co.

[The extract from the decision of the Commissioner of Patents referred to in Mr. McLean's letter is as follows:

"On the broad claim as well as the specific claim covering the device embodying not only the broad but the specific invention of a journal bearing with a soft metal lining, with ridges or projections so arranged that upon being brought in contact with the axle the ridges or portions will yield and spread out so as to make a perfectly fitting box, priority of invention must be awarded to Hopkins. For a journal box composed of hard and soft metal, the soft metal bands projecting on the journal bearing side beyond the surface of the hard metal, priority of invention must be awarded to Le Roy.

"The claims of the respective parties should be reformed so as to cover the inventions made by them, not their functions."]

Stone Ballast.

TO THE EDITOR OF THE RAILROAD GAZETTE:

Will you have the kindness to enlighten me upon a certain point? In constructing a stone-ballast road-bed, are the ties first laid, or is a bed of stone?

[First—If the stone is to be taken from cuts or places convenient to road-bed, hauled by teams and broken in track, it would be best to prepare the road-bed to the bottom of ties with stone *before* laying ties, surfacing and filling in afterward. Second—If the stone is to be brought from a distance in cars, either broken or to be broken in track, it would be best to lay the track at sub-grade and *raise* and *surface* track to grade with stone. This is the most satisfactory way, as railroad companies always desire to use the track as fast as laid, and unless earth ballast is very poor it is well to surface the track with earth at sub-grade and ballast afterward. It is in fact almost a necessity to do so on embankments, as they will continue to shrink for a year or more, and more so when the additional weight of ballast is placed on them when new.—EDITOR RAILROAD GAZETTE.]

Protecting Main Track From Cars Left on Sidings.

TO THE EDITOR OF THE RAILROAD GAZETTE:

Referring to the report of the Railroad Commissioners of New York on the Carlyon accident, and your comments thereon, permit me to call your attention to the fact that every side-track connected directly with main track on the Philadelphia, Wilmington & Baltimore Railroad was equipped with safety switches (which were called "dead" switches) at each connection, to prevent cars being blown or moved on to main track either accidentally or maliciously, or from being left too near main track by train-men. Some of these switches were used in 1867, and during the last years

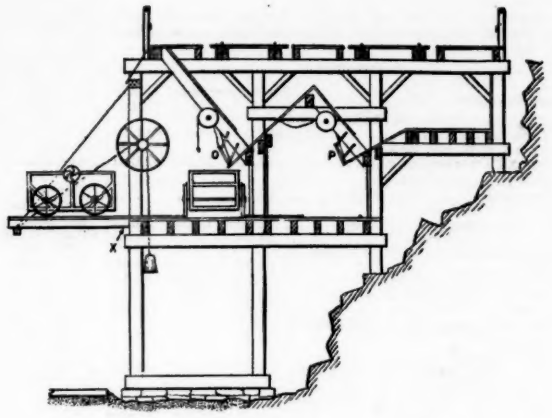


FIG. 13. SECTION, SUSQUEHANNA POCKETS.

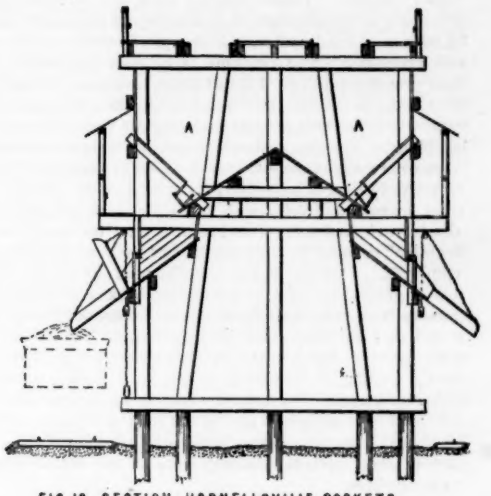


FIG. 12, SECTION, HORNELLSVILLE POCKETS.

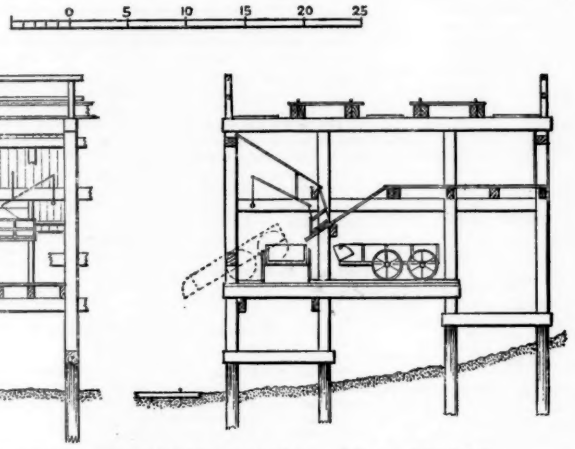


FIG. 11, ELEVATION. OLD POCKETS, WAVERLY. FIG. 10, SECTION.

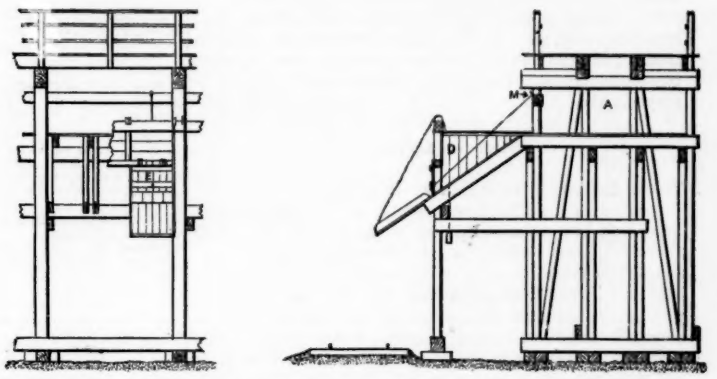


FIG. 9, ELEVATION. SOUTHPORT POCKETS. FIG. 8, SECTION.

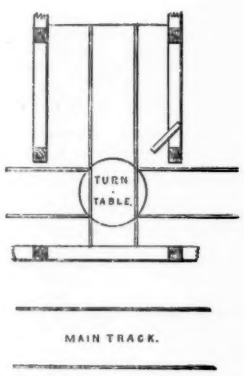


FIG. 7, SCALES ⅛.

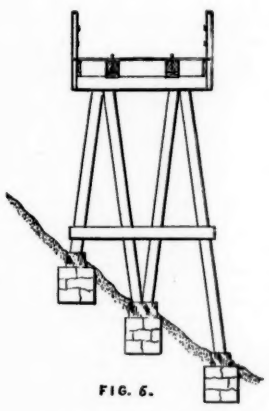


FIG. 6. BENT OF APPROACH.

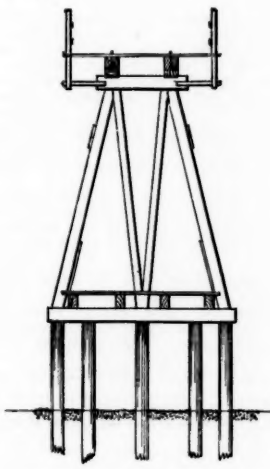


FIG. 5, BENT OF TAIL-TRACK.

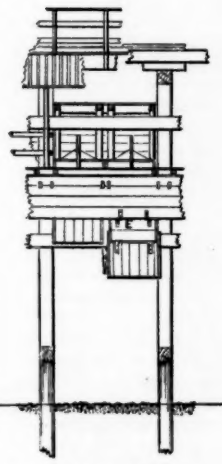


FIG. 4. ELEVATION.

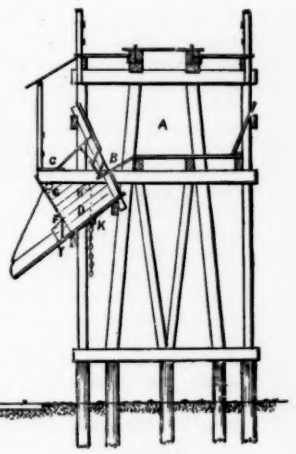
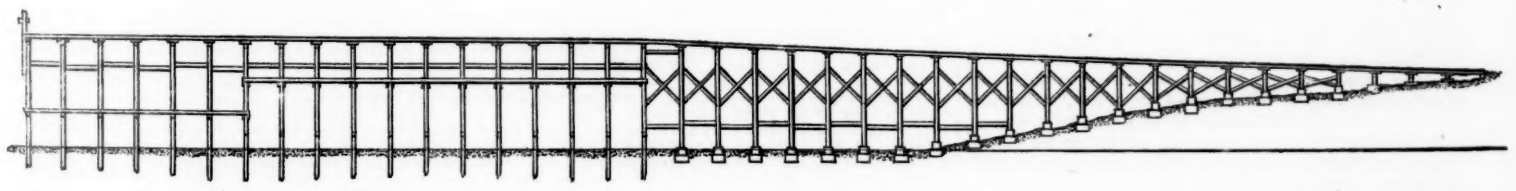


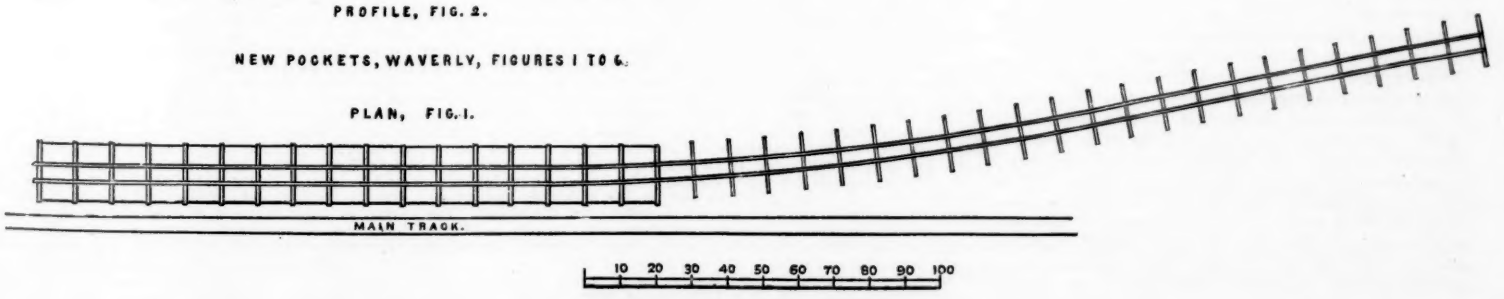
FIG. 3, SECTION.



PROFILE, FIG. 2.

NEW POCKETS, WAVERLY, FIGURES 1 TO 6.

PLAN, FIG. 1.



ENGINE COAL POCKETS ON THE SUSQUEHANNA DIVISION OF THE NEW YORK, LAKE ERIE & WESTERN RAILROAD.

of my charge of that roadway no side tracks were laid without each connection with main track being protected with its "dead" switch. These switches were the common stub switch placed in side track at or near where it became parallel with main track and *locked wrong*. Trackmen, trainmen and stationmen (if at a station) were made responsible for their proper condition. I recall many instances where cars were found at the dead switch, and as in the above case if a stub switch was used in main track the car would stop there; but if any of the approved safety switches were used in main track a car once on the main track would be very apt to take an active instead of a passive part in a collision. Every side track connected directly with main track should have its dead switch, and there would be no excuse for cars "accidentally" running on main track, but gross carelessness of employés. A similar switch was also used at railway crossings at grade, the single track being broken at sufficient distance from their main track, so that in case they run off at switch they could not reach the main tracks. These switches were placed in charge of the crossing tender, and kept locked wrong, making it necessary to set the switches before a train could cross. The first interlocking apparatus used on this road was attached also to the dead switches. I have heard that some interlocking companies are using them as a part of their system, but they were in use ten or fifteen years ago here.

I think I am correct in saying that this report of the Commissioners is the first official condemnation of the running of trains requiring two engines—and railway managers should take heed—a practice which should be prohibited except at special points, as on steep grades, or in special cases, removing snow, etc. On the above road, with its immense traffic, you may have a precedent also, against running two-engine trains, it having been abolished more than twenty years ago.

RIP VAN WINKLE.

Rail Inspection.

TO THE EDITOR OF THE RAILROAD GAZETTE :

Considering the satisfactory results of the Bessemer process which have been arrived at in Europe, it would seem that this process ought to have been brought to such a perfection also in our country as to make a poor product exceptional. That is, however, not quite the case at present. It is not my intention to be so impolite as to charge our Bessemer steel makers with being ignorant, nor would I charge them with intentionally deceiving the buyers of their rails; but if the cause of a poor product sometimes obtained be neither the one nor the other, how then explain that it sometimes occurs that railway companies receive whole lots of rails, which, after having been tested, are found not fit to put in the track? If this fact should be ascribed to carelessness during the manufacture, this would be much worse than if the causes were ignorance or intention to cheat the buyers. Whatever may be the cause of a poor product, it is, however, evident *that it must always be in the interests of the railway companies to have their orders supervised by competent persons during the manufacture.* Of course the railway companies have the right to return the rails in case they should not stand the tests; but if reliable tests were carried out at the rail mills, how much trouble and unnecessary expenses would be saved, both to the railway companies and to the manufacturers. In Europe no rail, as we well know, is shipped from the mill without having been first inspected and approved by an able rail inspector. Would it not pay to do the same in this country? Certainly it would. It is quite unexplainable to me, why our rail manufacturers do not insist on having the rails inspected before shipping them. If the inspector should during the manufacture find the rails to be of an inferior quality, he could notify the parties concerned, and the manufacturers would thus be saved the expense of making a large lot of bad rails, and the buyer saved the trouble of receiving and returning them. Only exceptionally do the railway companies in this country have their rails inspected, and when they do, the inspection is generally performed by persons who neither have any knowledge of metallurgy nor the least experience in rail manufacture. Thus I have met with so-called "rail inspectors," who told me themselves that they had not the slightest idea of the principles of the Bessemer process, and still less of the chemical composition of rails; and I know one so-called "inspector," who "inspected" a lot of 12,000 tons of rails for a railway company without making more than one drop test during the whole "inspection," and even on that occasion he was cheated by the foreman in the blooming mill, where the test was made, who undertook to anneal the rail ends before putting them under the hammer, thus making the "inspector" believe that the rails were of a better quality than was the case.

Besides experience in the manufacture of rails, it is desirable for a rail inspector to be also a thorough chemist, for without the help of chemistry it is often impossible to get an exact idea of the quality of the rail. A reliable inspection during the manufacture is of advantage, both to the maker and to the buyer, and in proportion as that will be clearly understood by our railway companies the necessity of returning whole lots of bad rails will be more rare. But if the rails are to be inspected at the mills, the inspection must be performed by a fully qualified person, for an ignorant inspector is a greater nuisance than no inspector at all.

M.

Joint Executive Committee Passenger Meeting.

The meeting of the Passenger Department of the Joint Executive Committee, the beginning of which was noted last week, came to a close on Friday, Sept. 28. The chief work of the meeting was the renewal of the contract between the roads, or rather the completion of a new contract on substantially the same basis as the old one. This new contract is to continue from Sept. 1, 1883, to Jan. 1, 1884.

Commissioner Fink announced the new percentages for the division between the companies. Those for first-class passenger business do not differ materially from the former proportions. A division of second-class business was made for the first time.

The rate sheet to take effect Oct. 1 was discussed and settled. The following schedule of new differential fares was agreed on:

EAST-BOUND.

	First-class.	Second-class.	Theatrical.
Cincinnati to New York—			
Cleve., Columb., Cincin. & Indian. and New York Central or Erie	$17.00	....	$14.00
Cin., Wash. & Balt. and Balt. & Ohio	17.00	...	14.00
N. Y., Penn. & Ohio and Erie	17.00	15.50	14.00
Cincinnati to Philadelphia—			
Cin. Wash. & Balt. and Balt. & Ohio	16.00	....	....
St. Louis to New York—			
Ind. & St. Louis and N. Y. Central	22.25	19.00	18.60
Ind. & St. Louis and Erie	21.75	...	18.40
Ind. & St. Louis and C., C., C. & I. and N. Y., P. & O.	21.75	....	18.40
Ohio & Miss. and Balt. & Ohio	21.75	19.75	18.40
O. & M., N. Y., P. & O. and Erie	22.25	19.75	18.60
Wabash and N. Y. Central	22.25	19.00	18.60
Wab., Ind., Bloom. & Western, Lake Shore and N. Y. Central	20.75	18.50	18.00
St. Louis to Boston—			
Wab.; I., B. & W.; N. Y., P. & O. and Erie	23.25	20.75	19.80
St. Louis to Albany—			
Wab.; I., B. & W.; N. Y., P. & O. and Erie	21.25	18.75	18.20
Chicago to Boston—			
Balt. & Ohio; Wab.; Gr. Trunk, Erie and Fitchburg	20.50	18.25	17.00
Chicago & Atlantic, Erie and Fitchburg	20.50	18.25	17.00
Chicago to Albany—			
B. & O.; Wab.; G. T.; Erie and Fitchburg	16.65	15.40	13.90
Chic. & Atlantic and Erie	16.65	15.40	13.90
Cleveland to New York—			
N. Y., P. & O. and Erie	12.50	11.50	10.20

WEST-BOUND.

New York to Cincinnati—			
B. & O. and C., W. & B	17.00	....	$14.00
Erie and N. Y., P. & O.	17.00	$15.00	14.00
New York to St. Louis—			
B. & O., I., B. & W. and Wabash	....	19.00	....
B. & O. I., B. & W., and Ind. & St. Louis	....	19.00	....
B. & O. and Ohio & Miss.	22.25	20.25	18.60
Lake Erie & Western and Chicago & Alton	....	19.00	....
N. Y. Central and Wabash	....	20.25	....
N. Y. Central and Ind. & St. Louis	....	20.25	....
Erie and Wabash	....	20.25	....
Erie and Ind. & St. Louis	....	20.25	....
Erie and Ohio & Miss.	22.25	20.25	18.60
Erie, N. Y., P. & O., I., B. & W. and Wabash	....	19.00	....
Erie, N. Y., P. & O., C., C., C. & I., and I. & St. Louis	22.25	20.25	18.60

The Lake Erie & Western and Chicago & Alton route retains the low differential between New York and St. Louis, except in the case of the second-class west-bound, which was advanced 50 cents, to $19. The Indiana, Bloomington & Western was given the same rates as the Lake Erie & Western. The Ohio & Mississippi's rates were the same as the Lake Erie & Western's, but were advanced on account of the improvement in the road's service. The rate west-bound from New York to St. Louis by this road is made 50 cents more than that east-bound, because the running time is faster from New York than to New York. The Toledo, Cincinnati & St. Louis narrow gauge was accorded differential fares on its line provided they were agreed to by competing lines. The application of the road for admission to membership in the Committee was not acted on.

The pooling contract was directed to be sent to the principal officers of the roads for their signatures as it was agreed to by the General Passenger Agents at the meeting. A new emigrant tariff will go into effect at the same time as the other rates.

The differential rates on first-class between New York and Chicago were not changed. The differential rates on second-class business between Chicago and New York were entirely done away with, the second-class rate being fixed at $17 for all the lines without exception.

There was a general discussion of irregularities in rates, and of the charges of cutting brought against several roads. Explanation of some of these charges was made and the rest were left to the Assistant Commissioner for further examination. At the close of this discussion the Committee adjourned.

Can a Passenger Car be Painted in Less Time Than 30 Days to Insure Durability, and if so, by What Method?

[Paper read before the Master Car-Builders' Convention at Baltimore, Sept. 20, 1883, by D. D Robertson, Master Painter of the Michigan Central Railroad at Detroit.]

The subject you have assigned me is quite characteristic of the present age, and in perfect harmony with the people among whom we live—everything must be done in *haste*—and the motto of the present day is "time is money." A few years ago the voyage across the Atlantic by sailing vessels occupied so many weeks, but is now successfully accomplished by steam in as many days. The tedious trip across the prairies by the steady plodding of a yoke of oxen at the rate of 20 miles a day is now superseded by the rushing train at twice that number of miles per hour. And what is true of travel is equally true of business. Look at the streets of our thronged cities—the constant stream of business men rushing to and fro as if their whole fortune depended upon reaching a certain point in a given number of minutes. And have not the agricultural districts kept pace with the commercial world? By the introduction of machinery farms of 300 acres can be more easily worked, with fewer hands, and in much less time than farms of 50 acres. While all this is true as to many branches of mechanical business, the same increased rapidity cannot be applied to those bordering on the professions. Our Association is composed of men whose work is as much professional as it is mechanical, and all the improvements which have been made in the past few years have been just so far as science and mechanism could help us in our material; but the labor part, partaking more of a professional character, can only be slightly if at all affected by the introduction of anything to secured increased rapidity or durability. What we need more than anything to add improvement to our work is what a noted artist said to a connoisseur when he asked him what it was he put into his colors to give them such a bright and natural effect, he answered: "*He always mixed his paints with brains.*"

I know of no system of painting superior to the *lead foundation, flat material for coloring, and good wearing body varnish for protecting.* Other systems have been introduced—they may be easier handled, cheaper, and finished in shorter time. Some of these advantages claimed for them, I even question, and I know that some new systems *cost as much and more;* if the labor is less the material is more costly, and I have yet failed to find any who have been trying new systems to affirm that they are superior to the old. Now, my experience would not warrant me to guarantee a car painted by the old system within 30 days to be durable and give entire satisfaction. One of the things, and, perhaps, the most prominent, in favor of durability is allowing ample time between the coats, especially the foundation of the work. Cars that are allowed sufficient time between the coats and also time when finished before running into service, in my experience, make by far the best record for durability. Take a car from the foundation, which is to be finished without rough stuff, and at the least calculation it has to be gone over nine times—three times before coloring and three times varnishing; and the time consumed in the whole of the work will be something like the following:

Priming	1 day
Should stand for	4 days
1st coating	1 day
Should stand for	4 days
Puttying	1 day
2d coating	1 day
Should stand for	3 days
Decorating	3 days
1st coat varnish	1 day
Should stand for	2 days
2nd coat varnish	1 day
Should stand for	3 days
3d coat varnish	1 day
Stand before going into service	4 days
Total	30 days

This is not allowing any time for filling up hard-wood corner posts or rails, and barely allowing time between the coats to secure durability. Those who have adopted the repeating process will reduce these figures, but after a fair trial with different varnishes of that process, I have for the present laid it aside as impracticable; the cars looked remarkably well when finished, and for some time after running kept up a good appearance, but they did not by any means make as good a final record as the old system.

A large majority of the car shops have not the facilities to do the work even as rapidly as that now given, the regular run of work preventing them giving employment constantly to a sufficient number of men in each department to carry a single car through in that time. Larger railroad and contract shops might be able to do so, but as a general thing it cannot be done by the old system in less time to secure durability, and I know of no new system that would—of course it is understood that the foregoing remarks have reference to a *first-class car* having the *usual amount of decoration.* Respectfully submitted.

The Railroads of Eastern Europe.

All the world has heard of the intimacy between the governments in Vienna and Berlin. Less than 20 years ago they were mortal enemies; now they are united for purposes offensive and defensive, against enemies to the east and to the west. This alliance has borne some practical results in the enlargement of the Austro-German railways, especially near the Russian frontier. Germany has tried very hard to have a double track for every railroad likely to carry troops in case of a Russo-German war, and Austria is trying to perfect its railroad net so as to make it more efficient, should Russia try to invade Galicia. A glance at a modern railroad map of Central Europe illustrates this point. A railroad runs from Cracow *via* Czernowitz into Roumania, and is substantially parallel with the Russian frontier. This road may be thought a rough periphery, the centre of which is Buda-Pest, the capital of Hungary. The radii which connects the centre with the periphery are not numerous, and at the request of the military authorities the number of them is increased. These radii are to tie Galicia, purely a Slavic country, more closely to the heart of the monarchy from which its people are separated by high mountains, by language, and by the natural preferences which draw them to Poland or Russia.

From Berlin the railroads run toward the Russian frontier in the shape of a fan, and are so numerous that a few days would suffice to send hundreds of thousands of combatants to almost any point near the frontier. In fact, taking these military railroads and the fortifications together, Russia may consider itself in constant danger, unless its neighbors are above suspicion. Meanwhile, Russia cannot but take precautionary measures, and the wonder is that more has not been attempted to place the vast empire in greater security. In Germany and Austria the plans for a war with Russia are complete, and every railroad car shows by a legend how many men, how many horses, how much baggage, or how many centals of war stores it is expected to carry. The Russians have not gone so far, although it is commonly assumed that the Russian railroads are built for military rather than for trade purposes. If the Russians consider the contingency of a war with their German and Austrian neighbors, they cannot be blamed, and, if they fortify themselves, they follow a very good precedent. And history has not been unjust when it has made Poland the probable battle-ground between the three empires which have distributed the ancient kingdoms between themselves.

At the same time, the military aspects of the case should not attract exclusive attention, and it should not be forgotten that every mile of road laid down in the vast region now under discussion will promote trade, and will help to take the cereals of Russia to the markets of the consumer. Transportation in Russia is notoriously imperfect, and very many grain regions under the jurisdiction of the Czar cannot reach the market for want of railroads. It is possible that the Russian roads now building or projected will carry soldiers to the field of battle and destruction; but it is certain that they will carry wheat and rye to the consumer, and that, in a remote way, they will compete with our own grain carrying roads. It is proper not to forget the fact that Russia alone is amply able to produce all the wheat needed by Europe, and that it will surely produce more than it does now, when it has more railroads and better system of agriculture. Russia has many thousands of square miles of virgin land fit for wheat culture, and if Russia were inhabited by Americans, these lands would be opened to trade by nothing else than railroads. But the roads would not be called "strategic lines."

The countries most in need of foreign cereals are the United Kingdom, France and Germany. Time will show whether they will be supplied by Russia or America—two countries wonderfully alike as grain producers. We used to rely on our praries; Russia matches them by her "black earth," which extends throughout her central and southern governments. We boast of our extreme West; Russia possesses a great East, which can supply all Europe with food. And even our mines of precious metals seem to have a competitor in Russia. Nominally, Russia opens this wealth for military purposes; in reality, the strategic lines of the Czar's empire will carry to the best markets of the world wheat, rye, meats, gold and silver, and a few years will suffice to make this competition quite formidable.—*Boston Advertiser.*

The Decline in Prices Since the Culmination of the Boom in 1880.

The following table shows the range of prices for No. 1 anthracite foundry pig iron, common bar iron, new iron rails, and steel rails, from February, 1880, the month in which the "boom" culminated, to the present time. The prices quoted are for a ton of 2,240 lbs., except for bar iron, which is quoted by the pound. Where the asterisk occurs there were no quotations to give, because no sales were reported.

Periods.	No. 1 anthracite foundry pig iron at Philadelphia.	Common bar iron at Pittsburgh, per pound.	New iron rails at mills in Pennsylvania.	Steel rails at mills in Pennsylvania.
February, 1880	$41.00	3.50c.	68.00	$85.00
January, 1881	25.00	2.25c.	46.50	60.00
January, 1882	26.00	2.50c.	48.50	58.00
August, 1882	25.50	2.50c.	45.00	47.00
January 1, 1883	25.00	2.20c.	*	40.00
April 1, 1883	22.50	2.00c.	*	39.00
July 1, 1883	21.50	1.90c.	*	38.00
Sept. 25, 1883	22.50	1.90c.	*	37.00

It will be seen that pig iron is as high to-day as in April last, and higher than on July 1.—*Bulletin American Iron and Steel Association.*

ANNUAL REPORTS.

The following is an index to the annual reports of railroad companies which have been reviewed in previous numbers of the present volume of the *Railroad Gazette:*

Louisville & Nashville.

The report of this company for the year ending June 30, 1883, is issued too late for an extended summary to appear in our columns this week, but the following brief statement comes to us in advance of the annual meeting.

The earnings and expenses for the year were as follows:

	1882-83.	1881-82.	Inc. or Dec.	P. c.
Earnings	$13,214,824	$11,987,745	I. $1,227,079	10.2
Expenses	8,075,698	7,429,371	I. 646,327	8.7
Net earnings	$5,139,126	$4,558,374	I. $580,752	12.6
Gross earn. per mile.	6,449	6,082	I. 367	6.0
Net " "	2,508	2,313	I. 195	8.5
Per cent. of exps	61.11	61.97	D. 0.86	..

This result makes a very good showing for the year, especially in the comparatively smaller increase in expenses.

The income statement is as follows:

Net earnings, as above		$5,139,126
Interest on investments		132,770
Total		$5,271,896
Interest and rentals	$4,230,415	
Taxes	339,409	
		4,569,924
Surplus for the year		$702,072

This surplus was equivalent to 2.8 per cent. upon the stock. The surplus for the previous year was $678,908, showing the slight gain last year of $23,164, or 3.2 per cent.

Grand Rapids & Indiana.

This company owns a line from Fort Wayne, Ind., northward to Petoskey, Mich., 332.50 miles. It has also two logging branches, the Manistee Branch, 14.51 miles, and the Missaukee Branch, 7.64 miles, and 53.20 miles of sidings. The report is for the year ending Dec. 31 last.

The company last year operated (and chiefly owned) leased lines as follows: The Cincinnati Richmond & Fort Wayne, from Richmond, Ind., to Fort Wayne, 86.36 miles; the Allegan & Southeastern, from Allegan, Mich., to Monteith, 11.50 miles (this line was sold Jan. 1, 1883); the Traverse City, from Walton, Mich., to Traverse City, 26 miles; the Bay View, Little Traverse & Mackinaw (opened Feb. 1, 1882), from Bay View, Mich., to Harbor Springs, 5.68 miles; the Grand Rapids, Indiana & Mackinaw (opened July 1, 1882), from Petoskey to Mackinaw City, 34.12 miles.

The equipment consists of 52 locomotives; 30 passenger and 16 baggage cars; 572 box, 1,055 flat and 39 caboose cars; 1 pay car, 6 snow plows, 2 derricks, 1 pile-driver and 2 wrecking cars.

The general account is as follows, condensed:

Stock		$4,985,081.22
Funded debt		8,000,000.00
Real estate bond and mortgage		27,500.00
Bills payable and interest		444,667.98
Coupon accounts		2,008,191.03
Accounts and balances		216,792.15
Total		$15,682,232.38
Road and equipment	$13,207,016 68	
Leased lines, stocks, bonds, etc	142,121.36	
Supplies	124,860.28	
Bills, accounts and balances	174,774.45	
Cash	311,244.79	
Profit and loss, debit balance	1,662,214.82	
		$15,682,232.38

The funded debt consists of $1,010,000 first mortgage bonds; $1,893,000 first mortgage land grant bonds; $4,000,000 first mortgage land grant bonds guaranteed; $1,097,000 income bonds, making a total of $8,000,000 as above.

The bills payable noted in the liabilities are held by the Pennsylvania Co.

The coupon accounts include $137,502.02 held by the Pennsylvania Co: $1,724,668.75 held by the Pennsylvania Railroad Co.; $6,020,26 due, but not presented for payments, and $140,000 due January 1, 1883:

The traffic for the year was as follows:

Train-miles:	1882.	1881.	Inc. or Dec.	P. c.
Passenger	581,317	549,052	I. 32,265	5.9
Freight	818,297	710,208	I. 108,089	15.2
Other	381,299	316,096	I. 6,5203	20.6
Total	1,780,913	1,575,356	I. 205,557	13.0
Pass car miles	2,178,692	2,000,314	I. 278,378	13.9
Freight car miles	14,407,849	12,492,572	I. 1,915,277	15.3
Passengers carried	927,183	734,313	I. 192,870	26.5
Passenger-miles	28,382,854	24,661,483	I. 3,721,371	15.1
Tons freight carried	734,571	612,610	I. 121,961	19 9
Ton-miles	93,283,242	79,316,473	I. 13,966,769	17.4
Av. train load:				
Passengers, No	49	45	I. 4	8.9
Freight, tons	114	112	I. 2	1.8
Av. receipts:				
Per pass.-mile	2 679 cts.	2.586 cts.	I. 0.093 ct.	3.6
" " net	0.500 "	0.518 "	D. 0.018 "	3.4
Per ton-mile	1.494 "	1.522 "	D. 0 025 "	1.6
" " net	0.361 "	0.428 "	D. 0.067 "	15.7

The average passenger train last year was 3.92 cars; the average freight train, 17.67 cars. Of the freight car mileage 63.95 per cent. was of loaded cars.

The earnings for the year were as follows:

	1882.	1881.	Inc. or Dec.	P. c.
Freight	$1,396,631	$1,206,819	I. $189,812	15.8
Passengers	760 500	637,693	I. 122,807	19.2
Mail and express	52,713	40,756	I 11,957	29.1
Miscellaneous	50,447	55,302	D. 4,855	8.8
Total	$2,260.291	$1,940.570	I. $319.721	16.5
Expenses	1,678,237	1,377.680	I. 300,557	21.8
Net earnings	$582,054	$562,890	I. $19,164	3.4
Gross earn. per mile	6,808	5,845	I. 963	16 5
Net " " "	1,753	1,695	I. 58	3.4
Per cent. of exps	74.25	70.99	I. 3.26	....

The earnings per passenger train mile were 139.9 cents gross and 33.5 cents net; per freight train mile, 170.7 cents gross and 41.2 cents net, the average for all trains being 161.5 cents gross; the expenses, 119.9 cents, and the net earnings, 41.6 cents.

The income account was as follows:

Net earnings, as above		$582,054.40
Interest on bonds	$478.065.00	
Interest on notes	25,902 98	
Losses and advances, leased lines	28,907.92	
		532,875.20
Surplus for the year		$49.179.20
Increase in floating liabilities		73,989.18
Total		$123,168.38
Stocks, etc., of leased lines	$28,291.81	
Back interest paid Pennsylvania Co	94,876.57	
		123.168.38

The cost of the Grand Rapids, Indiana & Mackinaw road has been $366,393, or $10,738 per mile. Of the bonds authorized for this road none have been sold, but 344 have been pledged for a loan of $275,000, and the balance needed was temporarily advanced by this company.

LEASED LINES.

The traffic of the leased lines was as follows:

	Train-miles.	Car-miles.	Passenger-miles.	Ton-miles.
Cin., Rich. & Ft. Wayne	304,580	3,483,956	4,390,749	21,663,861
Allegan & Southeastern	....	....	141.741	320 612
Traverse City	40,398	160,277	658,438	319,927
Bay View, Little Traverse & Mackinaw	22,397	34,568	134.219	17,660
G. R., Ind. & Mackinaw	65.273	136,598	383,166	207,767
Total	492,648	3,815 399	5,708,313	22,529,827

The Bay View, Little Traverse & Mackinaw road was worked for 11 months only, having been completed Feb. 1; the Grand Rapids, Indiana & Mackinaw for 6 months only, having been opened July 1.

The earnings of these lines for the year were as follows:

	Earnings.	Expenses.	Net earnings.
Cin., Rich. & Ft. Wayne	$435,764	$313,672	$122.092
Allegan & S.E	12,616	13,813	*1,197
Traverse City	34.539	28.327	6,212
Bay View, L. T. & M	4,931	8.238	*3,307
G. R., I. & Mackinaw	16,955	20,304	*3,349
Total	$504,805	$384,354	$120,451

*Loss.

The deficit on the Bay View, Little Traverse & Mackinaw and the Grand Rapids, Indiana & Mackinaw was expected, as they are new roads, with business still undeveloped.

The income statement for the year is as follows:

	Net earnings.	Charges.	Surplus or Deficit.
Cin., Rich & Ft. Wayne	$122,092	$177,047	D. $54.955
Allegan. & S. E	*1,197	....	D. 1.197
Traverse City	6,212	15,321	D. 9.109
Bay View, L. T. & M	*3,307	....	D. 3,307
G. R., I. & Mackinaw	*3,349	10,240	D. 13,589

*Loss.

The loss on the Traverse City road is an advance, to be repaid by the company hereafter. A new agreement has been made with that company, a lease replacing the old agreement. The Allegan & Southeastern road was sold to the Michigan & Ohio Co. at the close of the year. One-third of the loss on the Cincinnati, Richmond & Fort Wayne is paid by the Pennsylvania Company, and one-third by the Cincinnati, Hamilton & Dayton.

GENERAL REMARKS.

A new source of income last year was the carriage of iron ore to furnaces along the line, the ore coming over the new extension to the Straits of Mackinaw. The expenses were increased by new sidings, reductions of grade and other expenditures on betterments of the property, including extensions of both the logging branches. Five locomotives and six passenger cars added to the equipment, and 51 freight cars built to replace old ones worn out, were also charged to expenses. The total betterment expenditures included in expenses were $338,792.

There were 4,211 tons of new steel rails used in renewals, and the road-bed and track were much improved.

St. Louis, Alton & Terre Haute.

This company owns a main line from Terre Haute, Ind., to East St. Louis, Ill., 189 miles, with a branch to Alton, Ill., 4.2 miles. These lines are leased to the Indianapolis & St. Louis Co. The company also owns a line from East St. Louis to Belleville, 14.4 miles, and leases the Belleville & Southern Illinois, from Belleville to Du Quoin, 56.4 miles, and the Belleville & Eldorado, from Du Quoin to Eldorado, 50.2 miles; making the line operated 121 miles, from East St. Louis to Eldorado. The report is for the year ending Dec 31.

The equipment of the line worked consists of 17 locomotives; 12 passenger and 3 baggage cars; 200 box, 15 refrigerator, 25 stock, 500 coal, 40 flat and 5 caboose cars.

The general account is as follows:

Common stock		$2,300,000.00
Preferred stock		2,468,400.00
Funded debt		8,357,000 00
Sinking fund		655,000.00
Accounts and balances		265,688 52
Income account, balance		794,182 24
Total		$14,840,270.76
Stock account	$13,125,400.00	
Sinking fund trustees	655,000.00	
Special bond investment	303,530.55	
Cash and balances	195,678.26	
Due on old lease	560,661.95	
		14,840.270.76

The funded debt consists of $2,200,000 first mortgage 7 per cent. bonds; $2,800,000 second-mortgage preferred 7 per cent. bonds; $1,700,000 income 7 per cent. bonds; $1,257,000 dividend bonds, 6 per cent. There are also $300,000 equipment bonds which matured in 1880; of these $4,000 have been renewed at 5 per cent., and $50,000 are in dispute.

The traffic for the year was as follows:

	1882.	1881.	Inc. or Dec.	P. c.
Passengers carried	246.649	199,389	I. 47.260	23.5
Passenger-miles	6.202,045	5,268.969	I. 933.076	17.7
Tons freight carried	346.623	287.226	I. 59.397	20.7
Freight ton-miles	20,346,750	16,790,357	I. 3,556,396	21.2
Tons coal carried	393.270	392,689	I. 1,581	0.4
Coal ton-miles	11,388,988	10,649,473	I. 739.515	6.9
Av. rate:				
Per passenger-mile	2.70 cts.	3.00 cts.	D. 0.30 ct.	10.0
Per freight ton-mile	1.85 "	1.75 "	I. 0.10 "	5.7
Per coal ton-mile	2.37 "	2.50 "	D. 0.13 "	5.2

The freight exchanged with the Illinois Central at Du Quoin last year was 220,573 tons, of which 173,862 tons were through freight between St. Louis and Cairo. The average rate on this through freight was 0.86 cent per ton-mile.

The average earnings per train-mile were $2.47; expenses, $1.26, and net earnings, $1.21.

The earnings of the line operated for the year were as follows:

	1882.	1881.	Inc. or Dec.	P. c
Freight	$376.670	$294.118	I. $82.552	28.1
Coal	269,704	266,537	I. 3.167	1.1
Passengers	168.301	158,270	I. 10.031	6.3
Mail, etc	60.784	37,100	I. 23,684	64.0
Total	$875,459	$756.025	I. $119,434	15.9
Expenses	446,332	434,816	I. 11,516	2.6
Net earnings	$429,127	$321,209	I. $107.918	33.3
Gross earn. per mile	7.245	6,248	I. 987	15.9
Net " " "	3,547	2,655	I. 892	33.3
Per cent. of exps	51.00	57.50	D. 6.50	....

During the year 700 tons of steel rails and 45,000 new ties were used in renewals, and 44 new cars were built to replace old ones worn out.

The Belleville & Southern Illinois road shows a net revenue of $132,702.72 over rentals paid, and the Belleville & Eldorado a surplus of $22,803.67 for the lessee.

The income account for the year was as follows:

Net earnings of line worked		$429.126.75
Interest received		4.281.24
Rental received for main line		414.368.25
Total		$847,776.24
Rental, Belleville & S. I	$167,990.33	
" Belleville & Eldorado	22,205.72	
Interest on funded debt	424,480.00	
Legal expenses, etc	13,664 35	
New equipment and real estate	26.147 04	
Dividends on preferred stock	172,788.00	
		827,275.44
Surplus for the year		$20,500.80

The rental received for the main line was the net earnings as paid into Court for the 10 months to Nov. 1, and for November and December the regular payments under the new lease.

The dividends on preferred stock were 7 per cent., bringing up the payments on that stock to Dec. 31, 1881.

The new equipment bought included one freight locomotive, 1 combination passenger and baggage car and 15 refrigerator cars.

There was a general reduction in rates, largely caused by the new tariffs of the Illinois Railroad Commission.

During the year additions were made to the East St. Louis yard and to the sidings at other points.

A considerable increase in traffic is expected from the completion of the Texas & St. Louis road. A contract has been made by which the St. Louis business of that company will pass over this road.

The gross earnings of the leased main line for the year, as reported by the lessee, were as follows:

	1882.	1881.	Increase.	P. c.
Freight	$1,019,828	$936,740	$83,088	8 9
Passengers	362.424	333,485	28.939	8.7
Mail, etc	124.334	90,794	33,540	36.9
Total	$1,506,586	$1,361,019	$145.567	10.7
Per mile of road	7,798	7,045	753	10.7

The lease of the main line has been concluded, and an amended lease made, the particulars of which have been heretofore given. The new lease took effect Nov. 1 last.

St. Louis & Cairo.

This company, successor through foreclosure to the Cairo & St. Louis, operates a line from East St. Louis, Ill., to Cairo, 151.6 miles; there are 17.56 miles sidings. For the last year the company leased 5 miles, from South Junction to East St. Louis, but has now a track of its own between those points. The road is of 3 ft. gauge. The first annual report of the present company is for the year ending Jan 31 last.

The equipment consists of 22 locomotives; 9 passenger, 3 combination and three baggage cars; 131 box, 3 fruit, 8 stock, 490 coal, 50 coke, 87 flat and 11 caboose cars; 10 service cars, 41 hand and 30 push cars.

The general account is as follows :

Stock		$6,500,000.00
Bonds		2,600,000.00
Accounts and balances		27,900.64
Net income account		141,015.93
Total		$9,268,916.57
Road and property	$8,792,800.21	
Materials	7,918.10	
Cash, accounts and balances	468,198.26	
		9,263,916.57

The bonds are all first-mortgage bonds, but they receive interest only when earned, and the interest is not cumulative. The limit of interest is 5 per cent.

The traffic for the year was as follows :

Train-miles:	1882.	1881.	Inc. or Dec.	P. c.
Passenger	144 624	134,522	I. 10,102	7.5
Freight	167,574	299.423	D. 131,849	43.9
Service	20,791	20,660	I. 131	0.6
Total	332,989	454,605	D. 121,616	27.7
Passenger car miles	445 325	390,436	I. 54,889	14.1
Freight car miles	2,694,505	4,323,119	D. 1,628,614	37.7
Passengers carried	127,417	111.548	I. 15,869	14.2
Passenger-miles	2,831,945	2.290,808	I. 541,137	19 3
Tons freight carried	202.464	295,643	D. 93,179	31.5
Ton-miles	12,483,224	17,454,708	D. 4,971,484	28.5
Av. train load :				
Passengers, No.	20	17	I. 3	17.6
Freight, tons	74	58	I. 16	27.6
Av. rate:				
Per passenger-mile	3.125 cts.	3.643 cts.	D. 0.518 ct.	14.2
Per ton-mile	1.587 "	1.850 "	D. 0.263 "	14.2

Locomotive service cost 14.34 cents per mile run. The gross earnings per train-mile were 122.5 cents; expenses, 72 8, and net earnings 49.7 cents. The coal tonnage was 86,726 tons in 1882, against 211,041 tons in 1881.

The earnings for the year were as follows:

	1882.	1881.	Inc. or Dec.	P. c
Freight	$198,067	$163,087	I. $34,980	21.5
Coal	77,142	159.728	D. 82,586	51.6
Passengers	88.531	84.063	I. 4,468	5 3
Mail, etc	18.557	18,103	I. 454	2 5
Total	$382,297	$421,981	D. $42,684	10.1
Expenses	237,281	350,514	D. 113,233	32.3
Net earnings	$145,016	$74,467	I. $70,549	94.7
Gross earn. per mile	2,522	2,803	D. 281	10.1
Net " "	957	491	I. 466	94.7
Per cent. of exps.	62.06	82.48	D. 20.42	....

Earnings were diminished by high water, which cut off the road from the Cairo terminus for several months. Taxes are included in expenses, amounting to $9.940.23 last year.

The income account is as follows:

Net earnings, as above	$145,015.93
Rent of East St. L. & Carondelet tracks	4,000.00
Surplus for the year	$141,015.93

From this surplus there was paid on April 1,1883,interest on the bonds at the rate of 5 per cent. for the year, requiring $130,000, and leaving a balance of $11,015.93 on hand.

Improvements, included in expenses, were a new station and water tank; extensions of sidings; the filling in of 1 500 feet of trestle; the changing the channel of Lewis Creek, to permit the filling of four trestle bridges,and the laying of 197 tons of new steel rails.

From special funds, provided in the reorganization of the company, the extension of the road from South Junction to East St. Louis, where tracks had previously been rented, was nearly completed. Shops were built in East St. Louis, three new passenger stations and a new water tank built at points on the line. A connection was made with the Venice & Carondelet belt road. The completion of the improved line into Cairo was prevented by litigation over highway crossings.

Since the close of the year the line to East St. Louis has been completed and work begun on a branch of 12 miles from Columbia to the High Prairie coal fields.

New Brunswick.

At the close of the last fiscal year, June 30, 1883, this company operated the following lines:

New Brunswick Ry., Gibson to Edmundston	160¾	
Junction to Woodstock	11¼	
Aroostook, N. B., to Presqu' Isle, Me	34	
		206
New Brunswick & Canada, St. Andrews to Woodstock	94	
St. Stephen to Watt Junction	19	
McAdam Junction to Vanceboro	7	
Debec Junction, N. B., to Houlton, Me	7	
		127
Total		333

At the close of the fiscal year, July 1, 1883, the company leased the St. John & Maine road, from St. John to Vanceboro, 88 miles, with the Carlton Branch, 3 miles, increasing the mileage worked for the current year to 424 miles.

When the New Brunswick road was bought by its present owners early in 1881, it had 191½ miles of road of 3 ft. 6 in. gauge. In the spring of 1881 the work of widening the gauge to the standard width and laying steel rails was begun, and by the middle of October it had been completed except on that portion of the line lying between Aroostook and Edmundston. To relay the road 15,000 tons of steel rails were used. Changes were made at two points on the main line, whereby easier grades were obtained and the total length of the main line somewhat shortened. A new bridge, 2,300 ft. in length, was also built across the St. John at Woodstock in 1881. In the same year the Aroostook Branch was extended to Presqu' Isle, a distance of 14½ miles. In 1882 the gauge on the line from Aroostook to Edmundston was widened. These changes and improvements, and the purchase of new rolling stock and locomotives, cost the sum of $843.268.

On July 1, 1882,the New Brunswick Co.obtained a lease of the New Brunswick & Canada Railroad for 999 years. This increased the mileage of road operated by the New Brunswick Co. to 333 miles and gave it control of important connections and an independent outlet to an open port. Repairs and improvements were made on the leased road, costing $35,132 over and above the amount realized from the sale of old iron.

The company has a capital stock of $3,000,000, but no bonded debt is reported. There is a large land grant, which is held by the New Brunswick Land & Lumber Co., whose stock is held by this company.

The earnings and expenses for the year were as follows:

Freight	$332.017.16
Passengers	114 535.19
Mail, etc	41.872.04
Total earnings ($1,467 per mile)	$488 424.39
Expenses (60,42 per cent.)	295.098.17
Net earnings ($581 per mile)	$193,3 6.12
Rental New Brunswick & Canada Ry	63,856.32
Surplus for the year	$129,469.80

The surplus was equivalent to over 4 per cent. on the stock. No disposition of this surplus is stated.

The report says : "All the capital stock of the New Brunswick Land & Lumber Co., consisting of 14,000 shares, is owned by the New Brunswick Railway Co., which has made large advances to the Lumber Co. The New Brunswick Land & Lumber Co. owns 1,650,000 acres of the best farming and lumber land in the province of New Brunswick, and it is confidently expected that, by reason of the increased facilities which the railway now offers for transportation, as well as for other advantages leading to the better marketing of lumber, the Lumber Co. will soon be able to make payment on account of these advances, and the stock of that company prove a valuable asset to the New Brunswick Railway Co.

"The statements heretofore made of the extended improvements effected since the present board of directors undertook the management in the fall of 1880 will show what a radical change for the better has been wrought. From a small railway, entirely dependent for an outlet upon independent lines, and subject thereto both in the handling of its freight and the rates obtainable therefor, it is now possessed of important terminals at tide-water, and has by its new connection at Vanceboro direct communication by rail with the markets of the United States. All has been accomplished without the issue by the Railway Co. of a single bond or debenture, and the whole line is absolutely free from any indebtedness whatsoever."

An exploratory survey of the proposed extension to the St. Lawrence has also been undertaken. The report says : "It is expected that an estimate of the length and cost of such an extension can be accurately ascertained by the coming fall. Its construction will depend upon the assistance given by the Dominion and Provincial governments."

Peoria, Decatur & Evansville.

This company works a main line from Peoria, Ill., to Evansville, Ind , 248 miles, with a branch to New Harmony, Ind., 6 miles, making 254 miles in all. Of the main line 3 miles through Decatur, Ill., are leased from the Illinois Central Co., and 10 miles, from Peoria to Pekin, from the Peoria & Pekin Union Co. The following statements are from the report made to the Illinois Railroad Commission for the year ending June 30 last.

The equipment consists of 29 locomotives, 19 passenger cars and 1,505 freight cars.

The liabilities are stated as follows :

Stock	$8,400,000
Funded debt	4,845,000
Floating debt, current accounts and balances	129,005
Total	$13,374,005

The funded debt consists of $1,287,000 main line first-mortgage bonds; $1,470,000 Evansville Division first-mortgage bonds; $858,000 main line income bonds, and $1,230,000 Evansville Division income bonds, all bearing 6 per cent. interest. The interest on the income bonds is not cumulative. The yearly interest charge on the mortgage bonds is $165,420; on all the bonds, $290,700.

There were 268,853 passengers and 360,997 tons of freight carried during the year.

The earnings and income account for the year were as follows:

Passenger Department	$187,269 72
Freight Department	541,634.67
Total ($2,870 per mile)	$728,904.38
Expenses (65.87 per cent.)	480,117.27
Net earnings ($979 per mile)	$248,787 11
Interest paid	193,9:0 00
Balance	$54.867.11
Balance, July 1, 1882	3,689.36
Total	$58.556.47

Taxes, amounting to $28,187.25, are included in expenses. The net earnings were equivalent to 5.135 per cent. on the funded debt including income bonds.

There was expended for additional equipment during the

RAILROAD EARNINGS IN AUGUST.

Name of Road.	Mileage. 1883.	1882.	Inc.	Dec	P. c.	Earnings. 1883.	1882.	Increase.	Decrease.	P. c.	Earnings Per Mile. 1883.	1882.	Inc.	Dec.	P. c.
Ala. Gt. Southern	290	290	....	....	....	$ 90,219	73,794	$ 16,425	$	22.2	$ 311	$ 254	$ 57	$	22.2
Buffalo,N.Y.& Phila*	621	621	....	....	....	265,000	232,763	32,237	....	13.8	427	375	52	....	13.8
Bur., Ced. Rap. & No.	714	645	69	....	10.7	232,522	224,921	7,601	....	3.4	326	349	....	23	6.6
Canadian Pacific	1,704	790	914	....	115.7	576,310	284,799	311,511	....	118.0	338	335	3	....	9 0
Central Iowa	401	290	111	....	38.3	120,333	97,550	22,783	....	22.4	300	336	....	36	10.7
Central Pacific	3,183	3,080	3	....	0.1	2,282,000	2,350,557	....	68,557	2.9	740	763	....	23	3.0
Ches. & Ohio	517	517	....	....	....	382,114	381,454	660	....	0.2	739	737	92	....	0.2
Eliz., L. & Big San.	130	130	....	....	....	71,304	54,264	17,040	....	31.5	548	417	131	....	31.5
Chicago & Alton	850	850	....	....	....	861,169	856 398	4,771	....	0.5	1,013	1,008	5	....	0.5
Chi. & Eastern Ill	245	245	....	....	....	159,187	170,381	....	11,194	6.6	650	697	....	47	6.6
Chi. & Grand Trunk	335	335	....	....	....	222,729	158.784	63,945	....	40.2	665	474	191	....	40.2
Chi., Mil. & St. Paul	4,550	4,350	200	....	4.6	1,851,000	1,546,198	304,802	....	19 7	407	355	52	....	14 6
Chi. & Northwestern	3,600	3,325	275	....	8.4	2,453,000	2 211,622	241,378	....	10 9	681	665	16	....	2.4
Chi., St. P., M. & O	1,230	1,040	190	....	18.3	480,400	422.718	57,682	....	13.6	381	406	....	25	6 1
Chi. & West Mich.	410	370	40	....	10.8	145 755	125,732	20.028	....	16 0	356	340	16	....	4.8
Cin., Ind., St. L. & Chi.	342	342	....	....	....	242,694	237,496	5.198	....	2 2	710	694	16	....	2.2
Cin., N. O. & T. P.	336	336	....	....	....	241,133	228,334	12,799	....	5.6	718	680	38	....	5.6
Cin., Wash. & Balt.	284	284	....	....	....	182.000	203,078	....	21,078	10.4	641	715	....	74	10.4
Cleve., Akron & Col.	144	144	....	....	....	51.279	42.687	8,592	....	20.1	356	296	60	....	20.1
Connotton Valley*	140	106	34	....	32.1	40,498	29,128	11,370	....	39 2	289	275	14	....	5.1
Denver & R. Gr†	1,643	1,116	527	....	47.2	665,500	566,000	99.500	....	17.1	405	507	....	102	20.1
Des M. & Ft. Dodge	138	84	54	....	64.3	30.795	28,242	8,553	....	30.0	208	336	....	68	20 2
Det., Lan. & Nor.	226	226	....	....	....	150.0.0	134.6.9	15,361	....	11.4	654	596	68	....	11 4
Eastern	284	284	....	....	....	428.342	398,739	29,603	....	7.5	1,5.8	1,104	104	....	7.5
E. Tenn., Va. & Ga.	1,070	900	170	....	18.9	341,639	289,287	52,352	....	18.1	320	321	....	1	0 3
Mem. & Charleston	292	292	....	....	....	102 478	80 565	21,913	....	27.0	351	276	75	....	27.0
Evansville & T. H.	146	146	....	....	....	83,753	95,476	....	11.723	12.3	574	654	....	80	12.3
Flint & Pere Mar.	347	347	....	....	....	203,805	166,157	37,648	....	22.5	587	479	108	....	22.5
Florida Cen. & West.	234	234	....	....	....	32,094	31,039	1,055	....	3.4	137	133	4	....	3.4
Florida Transit & Pen.	243	243	....	....	....	32.449	29,313	3 136	....	10.7	134	121	13	....	10.7
Grand Trunk	2,321	2,225	96	....	4.3	1,382.700	1,310,838	71,862	....	5.5	596	590	6	....	1.0
G'n B., Win. & St. P.	220	220	....	....	....	0,935	30,697	238	....	0.7	141	140	1	....	0.7
Hannibal & St. Jo.	292	292	....	....	....	262,948	262 200	748	....	0.3	901	898	3	....	0.3
Houston, E. & W. Tex.	135	88	47	....	53.4	30,324	25,54	4,781	....	18.7	225	290	....	65	22.4
Ill. Cen., Ill. lines	928	919	9	....	0.9	645,155	6 6,844	....	41,689	6.1	695	747	....	52	7.0
Iowa lines	402	402	....	....	....	152.701	160.532	....	7.83	4.8	380	399	....	19	4.8
Southern Div.	578	578	....	....	....	281.883	236,585	45,298	....	19 1	488	409	79	....	19.1
Ind., Bloom. & West.	695	695	....	....	....	319.712	278.817	40,895	....	14.4	460	401	59	....	14.4
Kan. C., Ft. S. & G.	389	365	24	....	6.6	182,6 0	158,052	24,548	....	15.5	469	433	36	....	8.3
Kentucky Central	188	150	38	....	25.3	101,173	73,369	27,804	....	38.1	538	489	49	....	10.0
Lake Erie & West.*	386	386	....	....	....	148,745	169,715	....	20,970	12.3	380	440	....	54	12.3
Little Rock & Ft. S.	17.	168	5	....	3.0	30,626	34,610	2.016	....	5.8	214	206	8	....	3.9
Little Rk.,Miss. R. & T.	173	156	17	....	10.9	25,' 13	21.641	3,372	....	15.6	145	139	6	....	4.3
Long Island	354	3 4	....	....	....	382,787	357,916	24,871	....	6.9	1,081	1,011	70	....	6.9
Louisville & Nash.	2,070	2,028	42	....	2.1	1,230,900	1,043,911	186,989	....	17.9	595	515	80	....	15.5
Marq.,Hought. & Ont.	103	97	6	....	6.2	167,871	166,40	1,469	....	0.9	1,6 0	1,715	....	85	4.9
Mil., L. S. & West.	325	275	50	....	18.2	96,200	71 78	24,412	....	33.9	296	261	35	....	13.5
Mo. Pacific lines :															
Central Branch	388	388	....	....	....	144,665	93,389	51,276	....	55.1	373	241	132	....	55 1
Int. & Gt. Northern	825	775	50	....	6.5	297,836	298,070	....	234	0.1	361	385	....	24	6.2
Mo., Kan. & Tex.	1,374	1,300	74	....	5.7	710,419	625,424	84,99	....	13.6	517	481	36	....	7.5
Mo. Pacific	1,025	995	30	....	3.0	953,516	908.738	44,778	....	4.9	930	913	17	....	1.8
St. L., I. M. & So.	905	795	110	....	13.8	747,709	675,980	71,7 9	....	10.6	825	800	....	24	2.8
Texas & Pacific	1,487	1,410	77	....	5.5	546 556	452,155	94.40	....	20.9	368	321	47	....	14.7
Wabash, St.L. & P.	3,520	3,350	170	....	5.1	1,779,941	1,772,544	7,297	....	0.4	506	526	....	20	3.8
Mobile & Ohio	528	528	....	....	....	157,950	137.475	20,475	....	14.9	299	260	39	....	15.0
Nash., Chat. & St.L.	554	539	15	....	2.8	216,658	189,787	26,871	....	14.1	391	352	39	....	11.2
N. Y. & N. England.	399	399	....	....	....	377,223	346.490	30.733	....	8.9	945	868	77	....	8.9
N. Y., Sus. & West.	147	86	61	....	70.9	103,637	70,739	32,898	....	46.5	705	822	....	117	14.5
Norfolk & Western	503	428	75	....	17.5	261,711	222,161	39,550	....	17.8	520	519	1	....	0.2
Northern Central	322	322	....	....	....	587,272	625.970	....	38,698	6 2	1,824	1,944	....	120	6.2
Northern Pacific	1,927	1,300	627	....	48.2	1,016,650	727,215	289,435	....	39 8	528	559	....	31	5 5
Ohio Central	284	232	52	....	22.4	111,664	84,195	27,469	....	32.7	396	363	33	....	9.1
Ohio & Mississippi*	616	616	....	....	....	484,980	468,135	16,845	....	3.6	7.7	760	27	....	3.6
Ohio Southern	138	138	....	....	....	40,157	33,483	6,674	....	19 9	291	243	48	....	19.9
Pennsylvania ‡	2,070	1,954	116	....	5.9	4,775,380	4,671,179	104,201	....	2.2	2,307	2,391	....	84	3.5
Peo., Dec. & Evansv.	254	254	....	....	....	76,481	75,723	758	....	1.0	301	298	3	....	1.0
Phila. & Reading§	1,560	1,000	560	....	56.0	3,538,032	1,975.993	1,562,040	....	79.1	2,268	1,976	292	....	14.8
Rich.& Danville lines:															
Char., Col. & Aug.	343	327	16	....	4.9	58.788	48.296	10,490	....	21.8	171	148	23	....	15.5
Col. & Greenville	296	296	....	....	....	49,205	45,108	4,097	....	9.1	166	152	14	....	9.1
Rich. & Danville	757	757	....	....	....	317 595	296,717	20,878	....	7.0	420	394	28	....	7.0
Va. Midland	352	352	....	....	....	175,860	143.491	32,369	....	22.6	499	408	91	....	22.6
Western N. C.	190	190	....	....	....	44 977	30.7.4	14.223	....	46 3	237	162	75	....	46.3
Shenandoah Valley*	249	240	9	....	3.8	90,169	58,204	31,965	....	55.1	362	243	119	....	49.6
St. L., A. & T. H.:															
Main Line	195	195	....	....	....	198.082	166.637	....	38.555	23.1	657	855	....	198	23.1
Belleville Line	121	121	....	....	....	71,140	88,327	....	16,887	19.2	590	737	....	157	19.2
St. Louis & Cairo	152	152	....	....	....	39,583	32,558	7,025	....	21.5	260	214	46	....	21 5
St. Louis & San Fran.	730	660	90	....	13.6	269,500	381 637	....	12,117	3.1	495	578	....	83	14.6
St. Paul & Duluth	210	196	14	....	7.2	139 450	134,568	34,882	....	33 2	6 4	5 4	140	....	25 2
St. P., Minn. & Man	1,350	1,058	292	....	27.5	629,613	801,759	....	172,146	21.5	466	7.8	....	292	38.5
South Carolina	247	243	4	....	1.6	85,954	79,822	6.0.2	....	7.6	348	328	20	....	6.0
Tol., Cin. & St. L.*	856	484	372	....	76.8	132,000	89,368	42,632	....	47.9	154	185	....	31	16.8
Union Pacific	4,332	3,720	612	....	16.5	2,670,000	2,770,000	....	118.000	4.3	612	745	....	133	17.8
Utah Central*	280	280	....	....	....	93,586	120,877	....	27.291	22.6	334	432	....	98	22.6
Vicks. & Meridian	142	142	....	....	....	32,204	27.571	4,633	....	16 8	227	194	33	....	16.8
Vicks., Sh'vep't & P.*	73	73	....	....	....	9.873	6.69	3,175	....	47.4	135	92	43	....	47.4
West Jersey	188	177	11	....	6.2	215,986	199,246	16,740	....	8.4	1,149	1,126	23	....	2.0
Total, 86 roads	64,190	57,832	6,358	....	....	40,769,880	36,768,048	4,6 8,802	606,970	....	635	636	....	1	....
Total inc. or dec	....	....	6,358	....	11 0	....	....	4,001,83	....	10.9	....	....	....	1	0.2

* Not in the table for the eight months.
† Includes Utah lines.
‡ Includ s all lines east of Pittsburgh and Erie.
§ Includes New Jersey Central in 1883.

RAILROAD EARNINGS, EIGHT MONTHS ENDING AUGUST 31.

NAME OF ROAD.	MILEAGE.					EARNINGS.					EARNINGS PER MILE.				
	1883.	1882.	Inc.	D.	P. c.	1883.	1882.	Increase.	Dec.	P.c.	1883.	1882.	Inc.	Dec	P.c.
						$	$	$	$		$	$	$	$	
Ala. Gt. Southern	290	290	.....	...	.....	647,823	497,380	140,443	.....	28.2	2,199	1,715	484	..	28.2
Bur., Cedar Rap. & No.	714	645	69	...	10.7	1,709,367	1,714,597	.....	5,330	0 3	2,394	2,658	.....	262	9 9
Canadian Pacific	1,260	532	728	...	136.8	3,335 922	1 440 813	1,895,109	.....	131 5	2 648	2.708	....	60	2.2
Central Iowa	344	290	54	...	18.6	799.13	735. 88	63,84	.....	8.9	2.323	2 536	...	213	8.4
Central Pacific	2,943	2,980	...	12	0.4	15,850,125	16.583.176	.....	733,051	4.4	5,340	5 565	.....	225	4.0
Ch s. & Ohio	517	46	52	...	11.2	2.514.181	2,097,360	416,821	.....	19 9	4 863	4,510	353	....	7.8
Eliz .Lex. & B. Sandy	130	130	.. ...	...	.....	451.366	305.40	145,965	.....	47.8	3.472	2 349	1,123	....	47.8
Chi & Alton	850	850	.....	...	.....	5,382,704	4,993,148	389,556	.....	7.7	6 333	5,874	459	....	7.7
Cai. & Eastern Ill.	245	245	.....	...	.....	1.072.612	1,134.501	.....	61.889	5.5	3 109	3,288	.....	179	5.5
Cai. & Ed. Trunk	335	335	.....	...	.....	1,802,365	1,339,783	522.582	.....	38.9	5,560	3,999	1,562	....	38.9
Chi., Mil. & St. Paul	4,526	4,256	270	...	6.3	14.370.000	12,147,454	2,222,646	.....	18.2	3,186	2.854	332	....	11.6
Chi. & Northwestern	3,591	3,233	358	...	11.1	15,512,815	14,886,820	625.995	.....	4.2	4.320	4,605	.....	285	6.2
Chi., St. P., Minn. & O.	1,231	1,021	209	...	20 2	3,283,599	3,011,194	252,405	.....	8.4	2.6 3	2,951	....	298	10.1
Cui. & West Mich	410	370	40	...	10.8	1 020,617	957.310	63,307	.....	6.6	2,490	2,587	.. ..	97	3.7
Cin., Ind., St. L. & Chi.	342	342	.....	...	.....	1.596.968	1,647.149	.....	50 181	3,0	4.666	4,816	.....	147	3.0
C n., N. O. & Tex. P.	346	33	...	...	.....	1,625,56	1 611.869	.....	6,304	0.4	4,8*8	4,857	.....	19	0 4
Cin., Wash. & Balt	284	284	.. ..	...	.....	1,178.082	1,073,015	105,067	.....	9,8	4,148	3,778	370	....	9.8
Cleve., Akron & Col	144	144	...	...	.....	345.693	317,603	28,090	.....	8.8	2,401	2,206	195	....	8.8
Denver & Rio Grande*	1,502	1,070	432	...	40.4	4.661,100	4,167,599	493.501	.....	11.8	3.103	3,895	.....	792	20.3
Des M. & Ft. Dodge	135	84	54	...	64.3	198.429	223,868	.....	25.439	11.3	1,498	2,665	.....	1,227	46.0
Det., Lan. & No	226	226	...	...	.....	1.016,330	1.034,570	.....	18,240	1.7	4.497	4,577	....	80	1.7
Eastern	284	284	...	...	.....	2.401.7 6	2.231,491	169.245	.....	7.6	8.452	7.857	596	.....	7.6
East Tenn., Va. & Ga.	1,070	900	170	...	18.9	2.4 9.713	1,942.705	547.008	.....	28.0	2,306	2,158	148	.....	6 9
Mem & Charleston	292	292	...	...	.....	755.597	641,503	114,031	.....	17.9	2.588	2,197	391	.....	17.9
Evansv. & Terre Haute	146	146	...	...	.....	478,559	58 .449	.....	104,940	18.0	3.278	3,996	.....	718	18 0
Flint & Pere Marq	347	345	2	...	0.6	1,646 891	1,303 827	280 064	.....	20.5	4.746	3,962	784	....	19.8
Florida Cen. & West	234	234	...	...	...	260,641	258,119	2,522	.....	1 0	1.114	1,103	11	.....	1.0
Florida Transit & Pen.	24	205	38	...	18.5	313,677	233 339	50.338	.....	19.1	1,291	1,283	8	.....	0.6
Grand Trunk	2,321	2,225	96	...	4.3	11,446 705	10,582,696	864 009	.....	8.2	4,932	4,756	176	.....	3.7
Green Bay, Win. & St. P	220	220	...	...	.....	249,145	237.184	11,961	.....	5.0	1,132	1,078	54	.....	5.0
Hannibal & St. Jo.	292	292	...	...	.....	1,611,319	1,397,008	214.311	.....	15.6	5,518	4.784	734	.....	15.6
Houston, E. & W. T.	122	88	34	...	38 6	199.935	169,214	30,721	.....	18 2	1,639	1.923	.....	284	14.8
Ill. Cent., Ill. lines	926	919	7	...	0.7	4,197,812	4,473,975	.....	276,163	6.2	4,533	4.868	.....	335	6.9
Iowa lines	402	402	.....	...	.....	1,220,638	1,214,547	16.091	.....	1.3	3,061	3,021	40	.....	1.3
Southern Div	578	578	.....	...	.....	2.465.730	2,015,590	450,170	.....	22.3	4.266	3,487	779	.	22.3
Ind., Bloom. & West.	695	590	105	...	17.8	1.924.843	1,634,601	290,242	.....	17.7	2.770	2.771	..	1	0.1
Kan. C., Ft. S. & Gulf.	389	365	24	...	6 6	1,196,026	1,064,182	131,844	.....	12.4	3,074	2,916	158	.....	5.5
K ntucky Central	188	150	38	...	25 3	528,041	457,753	70,288	.....	15.4	2,809	3,052	.....	243	7.9
Little Rock & Ft. Smith	169	168	1	...	0 3	314,170	255,967	58,143	.....	22.7	1,859	1,524	335	.....	22.0
Little R., Miss. R. & Tex	173	156	17	...	10.9	229,375	155,419	73,956	.....	47.6	1,326	996	330	.....	34.0
Long Island	354	345	9	...	2.6	1.829,691	1,688,881	140,810	.....	8.3	5,168	4.895	273	.....	5.6
Louisville & Nashv.	2,048	2,028	20	...	0.9	8,745,583	7,915,804	829,779	.....	10.5	4,270	3,903	367	.....	9 4
Mar., Hought. & Ont.	99	90	9	...	10 0	570,228	813,814	.....	243,586	29.9	5,760	9.042	.....	3,282	36.2
Mil., Lake Sh. & West.	320	275	45	...	16.4	643,350	548,324	95,026	.....	17.2	2,010	1,994	16	...	0.8
Mo. Pacific lines:															
Central Branch	388	388	.....	...	.....	910,913	533,632	377,251	.....	70.6	2,347	1,375	972	.....	70.6
Int. & Gt. No	807	775	32	...	4.1	2,333 976	2,012,234	321,742	.....	16.0	2,892	2,597	295	.....	11.3
Mo., Kan. & Tex	1,374	1,235	139	...	11.3	4,618,499	3,755,081	863,415	.....	23.0	3,367	3,041	329	.....	10.5
Mo. Pacific	1,016	852	164	...	19.2	5,830 811	4,858.325	972,486	.....	20.0	5 739	5,702	37	.....	0.6
St. L., Iron Mt. & So.	885	729	156	...	21 4	4.811,999	4 422,802	389,197	.....	8.8	5,437	6,067	.....	630	10.4
Texas & Pacific	1,487	1,280	207	...	16.2	3,9 0 853	2,994,794	956,059	.....	32.2	2,637	2,316	321	.....	13.9
Wabash, St. L. & P.	3,520	3,350	170	...	5.1	10,380.045	10,602,341	.....	222,296	2 1	2.949	3,165	.....	216	6.8
Mobile & Ohio	528	528	.....	...	.....	1.258,605	1,151,596	107,009	.....	9.3	2,384	2,181	203	....	9.3
Nash., Chatta. & St. L.	534	536	15	...	2.8	1.514.115	1,357,605	156,5 0	.....	11.5	2 733	2,510	214	.....	8.5
N. Y. & New England	399	396	3	...	0.7	2,315.109	2,177,413	137,696	.....	6.3	5,802	5,499	303	.....	5.5
N. Y. Sus. & West	147	86	61	...	70.9	658,321	447,419	210,902	.....	47.1	4,478	5,202	.....	724	13.9
Norfolk & Western	459	428	31	...	7.2	1,690,334	1,438.655	251,679	.....	17.5	3.683	3,361	322	.....	9.5
Northern Central	322	322	.....	...	.....	4,006.410	3,698,215	308,195	.....	8 3	12,442	11,485	957	.....	8.3
Northern Pacific	1,695	1,095	600	...	54 6	5,347,754	4,080,599	1,267,155	.....	31.1	3.155	3,727	.....	572	15.5
Ohio Central	271	232	39	...	16.8	663,191	627.572	35.619	.....	8.8	2.521	2,705	.....	184	6.9
Ohio Southern	138	132	6	...	4.5	282,167	240 969	31,198	.....	13.5	1,900	1,750	150	..	8.6
Pennsylvania†	2,057	1,954	103	...	5.3	33,258 912	31,471.178	1,787,734	.....	5.7	16,168	16,106	62	.....	0.4
Peoria, Dec. & Evans.	254	254	.....	...	.....	454,179	516,021	.....	61,842	12.0	1,788	2,031	.....	243	12.0
Phila. & Reading‡	1,210	997	213	...	21.4	17,482,986	13,533,948	3,949,038	.....	29.2	14,449	13,574	875	...	6.4
Rich. & Danville lines:															
Caar., Col. & Aug	343	327	16	...	4.9	490,350	421.905	77.445	.....	18.3	1,456	1,290	166	.....	12.8
Col. & Greenville	296	293	.....	...	...	451,096	415.528	35,568	.....	8.5	1,524	1,404	121	.....	8.5
Rich. & Danville	757	757	.....	...	.....	2,354,683	2,215.715	138,968	.....	6.3	3,111	2,927	184	.....	6.3
Va. Midland	352	352	.....	...	.....	1,051,894	914,949	133.945	.....	14.9	2,988	2,599	389	.....	14.9
West rn N. C	190	174	16	...	9.2	221.873	146,441	75,432	.....	51.5	1,168	842	326	....	38.7
St. L., Alt. & T. Haute:															
Main Line	195	195	.....	...	.....	889.528	908,722	.....	26,194	2 9	4.526	4.660	....	134	2.9
Belleville Line	121	121	.....	...	.....	519,507	552,202	.....	32,695	5.9	4.293	4,564	.....	271	5.9
St. L. & Cairo	152	152	.. ..	...	.....	247.743	236,718	11,025	.....	4.7	1,630	1,557	73	.....	4.7
St. L. & San Francisco	740	660	80	...	12 1	2.346.512	2,214,099	132,413	.....	6.0	3,171	3,355	...	184	5.9
St. P. & Duluth	201	196	5	...	2.6	802.647	621,771	180,876	.....	29 1	3.993	3,172	821	.....	25.9
St. P., Minn. & Manitoba	1,313	930	383	...	41.2	5,154,921	5,286,038	.....	131,167	2.5	3,924	5,684	.	1,760	30 9
South Carolina	244	243	1	...	0.4	704,164	736.607	67,557	.....	9.3	3,255	2,990	265	.....	8.9
Union Pacific	4,332	3,720	612	...	16.5	18,632.766	18 755 278	.....	122,512	0.6	4,301	5,042	.....	741	14 7
Vicksburg & Meridian	142	142	.....	...	.....	294.490	289,109	25,381	.....	9 3	2,074	1,892	182	....	9.3
West Jersey	185	172	14	...	8.1	871,988	778,902	93,086	.....	11.8	4,688	4,529	159	.. ..	3.6
Total, 78 roads	59,339	53,434	5,947	12	.....	260,998,509	238,196,709	24,923,520	2,121,729	....	4,396	4,458	.....	62	....
Total inc. or dec.	.....	.....	5,935	...	11.2	.. ..	.....	22,801,800	.....	9.6	.....	.....	.....	62	1.4

* Includes Utah lines. † Includes all lines east of Pittsburgh and Erie. ‡ Includes New Jersey Central from June 1, 1883.

year the sum of $58,758.33, making an excess of payments of $201.86, which is carried forward as debit balance to the current year.

The report says that seven persons were killed on the road and 12 injured, making a total of 19 casualties during the year.

Cincinnati, Indianapolis, St. Louis & Chicago.

At the close of the last fiscal year, June 30, 1883, this company operated the following lines:

	Miles.
Main Line, Cincinnati to LaFayette, Ind	173.53
Lawrenceburg Branch	2.57
Cin., LaFayette & Cai., LaFayette to Kankakee, Ill	75.50
Harrison Branch	7 40
Fairland, Franklin & Martinsville R. R.	38.30
Vernon, Greensburg & Rushville	44.39
Total	341.69

The leased lines are substantially owned. The company also operates the Kankakee & Seneca road, 42 32 miles, in which it owns one-half interest, but its earnings are not included in the report.

The equipment consists of 75 locomotives; 52 passenger, 3 parlor, 6 chair, 8 postal and 16 baggage cars; 1,974 box, 143 stock, 791 flat, 180 coal and 39 caboose cars; 4 tool and 3 camp cars.

The general account is as follows, condensed:

Stock	$7,000,000.00
Funded debt	7,488,650.00
Equipment notes	144,6 7.50
Bills, accounts and balances	593,370.49
Profit and loss	353,644 97
Total	$15,580,302.96
Road and equipment	$13,657,844.70
Cincinnati station, elevators, etc	603,630.21
Stocks and advances, leased lines	93 .73.36
Materials	140,724.96
Bills, accounts and balances	209,449.94
Cash	30.939.59
	$15,580,302.96

The funded debt consists of $1,600,000 Indianapolis & Cincinnati 7 per cents; $1,828,000 Cincinnati & Indiana 7 per cents and $33,650 funded coupons; $2,790,000 Indianapolis, Cincinnati & LaFayette 7 per cents; $39,000 equipment 6 per cents, and $1,198,000 consolidated 6 per cents. The interest charge is $511,836 yearly.

Charges to construction account were for lands, etc., $21,334; Tanner's Creek improvement, $136,124; new sidings (7.47 miles), $24,411; new equipment, $115,052. Construction account was credited with $78,253 for sale of lands. The new grain elevator at Cincinnati was completed and has proved valuable. The new equipment bought included 4 locomotives, 5 parlor cars, 2 passenger cars, 2 combination passenger and baggage cars and 2 postal cars.

The average receipt and cost per unit of traffic were, in cents:

	1882-83. Receipt.	Cost.	Net.	1881-82. Receipt.	Cost.	Net.
Per passenger-mile	2 38	1.88	0.50	2.37	1.67	0.70
Per ton-mile	1.21	0.75	0.46	1.18	0.67	0.51

The increase in the average rates was probably due to the larger proportion of local business last year.

The traffic for the year was as follows:

Train miles:	1882-83.	1881-82.	Inc. or Dec.	P. c.
Passenger	804.260	764,781	I. 39,479	5.2
Freight	698,136	901,664	D. 203,528	22.5
Other	108,654	.....	.....	...
Total	1,611,050	.....	.....	...
Pass. car miles	3,764,612	3.228,252	I. 536,360	1.66
Freight car miles	17.218 014	18,541,154	D. 1,323.140	7.1
Passengers carried	918.027	883.530	I. 35.397	4.0
Passenger-miles	35.997.821	34,845,953	I. 1,151,868	3.3
Tons freight carried	1.221 775	1,201,319	I. 20,456	1.7
Ton-miles	129,853,902	134,134,071	D. 4,280,169	3.2
Av. train load:				
Passengers, No	45	46	D. 1	2.2
Freight, tons	186	149	I. 37	24.8

The average passenger journey was 39.17 miles; the average freight haul, 106.28 miles. The average train earnings were for through passenger, $1.40; commutation, $0 64; branch trains, $0.80; freight, $2.21 per mile run.

The earnings for the year were as follows:

	1882-83.	1881-82.	Inc. or Dec.	P.c.
Freight	$1,558.569	$1,534,.05	I. $24.564	1.6
Passengers	832 092	787,690	I. 44.402	5.6
Mail, etc	151,119	142.032	I. 9,117	6.4
Total	$2,541,780	$2,463.697	I. $78,083	3.2
Expenses	1,643,805	1.525,387	I. 118,418	7.8
Net earnings	$897.975	$938,310	D. $40,335	4.3
Gross earn. per mile	7,439	7.210	I. 229	3.2
Net " "	2,928	2,746	D. 118	4.3
Per cent. of exps	64.67	61.91	I. 2.76	....

During the year 156,570 ties were used in renewals and 17,495 car-loads of gravel were used for ballasting, improving road-bed and repairing damages by floods.

There was a large decrease in corn carried, owing to a short crop along the line and abundant crops south of Cincinnati. There was an increase in miscellaneous freights.

Taxes are included in expenses, amounting to $52,314 last year.

The income account was as follows:

Net earnings, as above		$897,975.11
Rents, interest, etc		56.178.52
Kankakee & Seneca interest		19,500.00
Total		$973,653.63
Interest	$621.158 54	
Sundry charges	2.344.08	
Dividends, 4½ per cent	315,000.00	
		938,502.62
Surplus for the year		$35,151.01
Balance, July 1, 1882		318.493.96
Balance, July 1, 1883		$353,644.97

Three quarterly dividends of 1½ per cent. were paid, but for the fourth quarter the dividend was passed.

The passenger station at Cincinnati is finished, and is being used by the Cincinnati, Washington & Baltimore, the Ohio & Mississippi, the Cleveland, Columbus, Cincinnati & Indianapolis and this company. The office building is well under way, and will be completed during the year. The estimated cost of finishing is $201,500, of which $100,000 is due the company from various companies and individuals, and $101,500 must be provided from current receipts.

The report says: "At the time of writing the last report, the rebuilding of the road between Lawrenceburg Junction and Sunman's was in progress. It had been so badly damaged by successive floods that it was found, as the work proceeded, to be more of a task than was anticipated. Ten bridges were rebuilt on the combination plan, of iron and wood; new abutments of large stone, laid in cement, were put in; portions of the road below high-water mark raised; curves taken out, and the line vastly improved. In doing this work 2,000 tons of 67-lbs. steel rails were used; 9,941 new cross ties, and 11,755 cubic yards of masonry constructed; 1,728 lineal feet of bridging built, and 12,380 cars of gravel distributed. The estimated cost of this work, less old material, and not charging for transportation of materials over our own line, was $289,689, of which $136,125 was charged to construction, and the balance to expenses. In doing this work, and hauling the material for the same, there was much delay to the regular traffic of the road, in consequence of which much of the legitimate business of the company was, for a time, diverted to other lines; yet, for the six months ending Dec. 31, 1882, the gross earnings from traffic increased, as compared with the corresponding time in the previous year, $112,405.34. In January there was a large decrease; in February the Ohio River came over its banks higher than was ever known, overflowing 20 miles of main track of the company, and stopping the traffic for 14 days. Unfortunately, the expenses did not stop, but were increased, in consequence of the necessity of employing the entire force to watch the endangered property during the high water, and, after the flood had subsided, in cleaning and repairing yards and tracks. For the remaining four months of the year, the earnings steadily increased, * * * * The operating expenses of the year were $1,591,390; included in this amount is the item of $99,709 for repairs of bridges, and $277,362 for repairs of track, including rails and ties; of these two items it is estimated that $130,000 is due to extraordinary expenses caused by floods. The extraordinary expense in repairs of bridges will be seen when it is considered that 1,986 lineal feet of bridges were rebuilt during the year, while the entire length on the main line is but 5,090 feet, showing that over one-third was renewed. The net earnings, after paying these extraordinary expenses, were $950,289; deducting extraordinary expenses they would have been $1,080,000. This is the income from traffic alone, and does not include receipts from the new passenger station in Cincinnati, the grain elevator, coal elevator, the Kankakee & Seneca Railroad, or any rental from lands. In previous years this income has gone into monthly earnings, but this year the system of accounts has been changed, and all income from sources other than traffic has been credited directly to profit and loss. The new credit this year to profit and loss account, outside of transportation earnings, was $73,334, only $27,000 of which, however, was received in cash, the balance being made up of credits for rent and interest on construction account of passenger station at Cincinnati, interest on advances to branch roads, and accrued interest on securities held by the company. * * *

"The pools existing with other lines between Cincinnati, Indianapolis and Chicago have been ended, and agreements for the maintenance of rates substituted, which are working satisfactorily.

"The management deeply regret the necessity of passing the July dividend. The unforeseen casualities of the past year necessitating the enormous outlay for extraordinary repairs and expenses, together with the consequent loss of business, have largely cut down the net earnings, and the directors thought it wise and for the best interests of your property to pass the dividend.

"As will be seen by the Treasurer's statement, the full 6 per cent. dividend could not be paid without calling upon the surplus of the previous year, and your directors were unwilling to do this, especially as that surplus was invested in fixed plant, and the company besides was owing money which must be provided for.

"The fixed charges during the year were: For interest on bonds, $621,158, and for taxes, $52,314; a total of $673,472, to be provided for before dividends could be declared on the capital stock. The fixed charges for the coming year will be about the same.

"The financial condition of the company at the close of the year was as follows:

Liability as endorser for advances to branch lines	$265,519
Equipment notes due in monthly installments	144,637
Notes for coal on hand	41,776
Outstanding notes for borrowed money	247,915
Total floating debt	$699.347

"The company holds and is entitled to receive for advance to branch lines, in addition to certain stocks and second mortgage bonds, $260,000 first mortgage bonds which it should sell; as they are a first-class security they should bring par. This would reduce the indebtedness to $439,347.

"The above does not include the indebtedness stated in treasurer's balance sheet for supplies and current expenses, since paid out of July receipts.

"The equipment and coal notes extending over considerable time can be easily provided for out of the earnings, as also the amount required from time to time to complete the new passenger station.

"This would leave a balance of indebtedness to be provided for of $253,433. Whether all dividends shall be discontinued until this debt is extinguished, or smaller dividends declared and the debt partially liquidated and the balance carried on for a time, is a matter which the directors have not yet considered, thinking it best to wait until the crops were assured and the condition of the money market in the fall developed.

"As has been shown in this report your property has been extensively improved and placed beyond liability in future to any such serious misfortune as has occurred during the past year. When once the company has fully recovered its position we feel that it will be stronger than ever before."

RAILROAD GAZETTE

Published Every Friday.

CONDUCTED BY

S. WRIGHT DUNNING AND M. N. FORNEY.

EDITORIAL ANNOUNCEMENTS.

Passes.—*All persons connected with this paper are forbidden to ask for passes under any circumstances, and we will be thankful to have any act of the kind reported to this office.*

Addresses.—*Business letters should be addressed and drafts made payable to* THE RAILROAD GAZETTE. *Communications for the attention of the Editors should be addressed* EDITOR RAILROAD GAZETTE.

Contributions.—*Subscribers and others will materially assist us in making our news accurate and complete if they will send us early information of events which take place under their observation, such as changes in railroad officers, organizations and changes of companies, the letting, progress and completion of contracts for new works or important improvements of old ones, experiments in the construction of roads and machinery and in their management, particulars as to the business of railroads, and suggestions as to its improvement. Discussions of subjects pertaining to* ALL DEPARTMENTS *of railroad business by men practically acquainted with them are especially desired. Officers will oblige us by forwarding early copies of notices of meetings, elections appointments, and especially annual reports, some notice of all of which will be published.*

Advertisements.—*We wish it distinctly understood that we will entertain no proposition to publish anything in this journal for pay,* EXCEPT IN THE ADVERTISING COLUMNS. *We give in our editorial columns* OUR OWN *opinions, and those only, and in our news columns present only such matter as we consider interesting and important to our readers. Those who wish to recommend their inventions, machinery, supplies, financial schemes, etc., to our readers can do so fully in our advertising columns, but it is useless to ask us to recommend them editorially, either for money or in consideration of advertising patronage.*

AUGUST EARNINGS.

Our table of railroad earnings in August, published this week, has returns from 86 roads with this year 64,190 miles of railroad, 60,166 miles of which are in the United States, and form more than one-half of the total now in operation. The total mileage is 6,358, or 11 per cent. more than last year. The aggregate earnings of these 86 roads were $40,769,880 this year, which is $4,001,832, or 109 per cent. more than last year, and their average earnings per mile were $635, $1 less than last year—a better comparison than before for some months, and the more encouraging because traffic on many roads had become very good in August last year, when the heavy winter wheat crop was moving freely, and there was the greatest activity in iron manufactures and railroad construction. Then, as now, our table showed a decrease of just $1 in average earnings per mile, compared with the previous year. In previous months of this year the comparison of average earnings per mile with last year has shown the following results:

January	Dec. 1.2 p. c. to $506	May	Dec. 2.5 p. c. to $543
February	" 4 " " " 453	June	" 1.4 " " " 545
March	Inc. 7.2 " " " 582	July	" 3.0 " " " 550
April	Dec. 2.2 " " " 532	August	" 0.2 " " " 635

In every month of the year except March, therefore, there has been a decrease in the average earnings per mile of the roads reporting, varying from $19 in February to $1 in August.

This year only 15 of the 86 roads show any decrease in total earnings and 29 a decrease in earnings per mile, and these decreases are nearly all small. The largest percentages of decrease in earnings per mile are 20.1 per cent. on the Denver & Rio Grande, 20.2 on the Des Moines & Fort Dodge, 22.4 on the Houston, East & West Texas, 23.1 on the Terre Haute Main Line and 19.2 on the Belleville Line, 38.5 on the Manitoba, 16.8 on the Toledo, Cincinnati & St. Louis, 17.8 on the Union Pacific and 22.6 on the Utah Central. No other decrease was as much as 15 per cent., but there were six others more than 10 per cent.

Large increases were more numerous. There were 13 of more than 20 per cent., eight of more than 25 per cent., six of more than 30 per cent., and five of more than 40 per cent. All that increased more than 20 per cent., still had less than the average earnings per mile except the Chicago & Grand Trunk and the St. Paul & Duluth, which had $665 and $664 respectively, while the average was $635.

The roads with the largest and smallest earnings per mile in August were:

Largest:	*Per mile.*	*Smallest:*	*Per mile.*
Pennsylvania	$2,307	Florida Transit	$134
Reading	2,268	Vicks. & Shreveport	135
Northern Cen.	1,824	Florida Central	137
Marquette & Ont.	1,630	Green Bay, W. & St. P.	141
Eastern	1,508	Little Rock, M. R. & T.	145
West Jersey	1,149	Tol., Cin. & St. L.	154
Long Island	1,081	Columbia & Greenville	166
Chic. & Alton	1,013	Char., Col. & Aug.	171
N. Y. & New England	945	Little Rock & Ft. Smith	214
Missouri Pacific	930	East & West Texas	225
Hannibal & St. Jo.	901	Vicksburg & Meridian	227

Although comparatively few Eastern roads report, six of the eight roads having earnings of more than $1,000 a mile were in the East, and of the eleven roads with very small earnings all but two are in the South. There were seven other roads that earned less than $300 per mile, while there was but one more (the Iron Mountain) that earned as much as $800 and only four more that earned as much as $700 per mile.

August is usually a better month for earnings than July, not only in the West, where the new wheat begins to move in August, but in the South, where August is the end of the crop year, and in the Northwest, north of the winter wheat and corn exporting district, though there usually to a less extent. This is not wholly dependent upon the crop movement of course. In nearly all parts of the country, shipments of merchandise are at a minimum in July, and there is less travel then than later. Last year August came just after a very bad crop year, and at the beginning of a good one, but this was felt not in corn nor in cotton, but only in other grains, the movement of which was stimulated by a very short supply the world over. This year the world was unusually well supplied with wheat, and the new crop afforded an unusually small supply, but there was a considerable surplus of corn to ship, while the year before there was very little. So far as these facts have influence, there was thus less difference between the two years than might have been supposed, and actually the advantage was with this year, the large corn movement more than counterbalancing the smaller wheat movement. The receipts of the Northwestern markets for the five weeks ending Sept. 1 were 34,400,000 bushels this year against 28,800,000 last, and it was largely the same roads that lost in wheat that gained in corn.

The progress from July to August, being near what may be called the beginning of the business year for many parts of the community, as well as the railroads, has considerable significance, to some extent foreshadowing the condition of traffic for the fall and even the winter months. For some parts of the country estimates of the season's business are made by August, and purchases of goods, production of manufactures, etc., are to a considerable extent affected thereby, though as the fate of corn and cotton may be settled thereafter, these estimates cannot be made so early for the whole country, and all estimates have to be revised later. Bearing this in mind it may be well to compare the changes from July to August this year and last in different sections of country and on some leading roads.

In the country northwest of St. Paul—the newest and most rapidly growing part of the continent—the four roads reporting had the following earnings per mile:

	1882.		1883.	
	July.	August.	July.	August.
Can. Pacific	$281,263	$264,799	$548,886	$576,310
Northern Pacific	694,067	727,215	841,000	1,016,650
Manitoba	853,596	801,759	612,766	629,613
St. P. & Duluth	96,699	104,568	137,973	139,450
Total	$1,925,325	$1,898,341	$2,140,625	$2,362,023

There are few roads in the country on which less grain moves in August than on these. It is the harvest month of the country through which they run—the extreme end of the crop year. We see that on the two northwestern ones earnings were less in August than in July last year; while they were larger in August on all this year. In the aggregate their earnings were $26,984 (1.4 per cent.) *less* in August than in July last year, and $221,348 (10.3 per cent.) *more* this year. That is, they show better progress this year than last.

The miles worked, gross earnings and expenses per mile of these four roads in August were as follows this year and last:

	1883.	1882.	Inc. or Dec.	P. c.
Miles	5,191	3,344	I. 1,847	55 2
Total earnings	$2,362,023	$1,898,341	I. $463,682	24.4
Earn. per mile	455	568	D. 113	20.0

The immense addition to mileage sufficiently explains everything here. The increase in earnings is much less than in mileage, resulting in a decrease of 20 per cent. in earnings per mile. The Canadian Pacific fully held its own in earnings per mile, and the St. Paul & Duluth (which is in a country which does not grow much) made a large increase, but there was a small decrease on the Northern Pacific and a great one on the Manitoba.

We next take up the other roads west, northwest and southwest of Chicago, including all that report (twelve) as far south and east as the Chicago & Alton, but excluding all south and west of the Missouri, roads much the same in character of traffic as those just mentioned but much older, and with a vast traffic in corn, winter wheat and live stock which the lines further north do not have at all, and of course roads with an earlier crop year. Three of them, the Northwestern, the Milwaukee & St. Paul and the St. Paul & Omaha, have a great deal of road in new country which has but recently begun to fill up, and so far as these roads are concerned they are more like the group northwest of St. Paul than like the roads further south. We give the figures for only a few of the separate roads; the totals are for the twelve, as follows:

	1882.		1883.	
	July.	August.	July.	August.
Mil. & St. P.	$1,464,927	$1,546,198	$1,829,000	$1,851,000
St. P. & Omaha	359,459	422,718	433,830	480,400
Chi. & N. W.	2,059,952	2,211,622	2,170,000	2,453,000
Ill. Cen. in Iowa	140,052	160,532	147,495	152,701
B., C. R. & N.	198,276	224,921	195,589	232,522
Marq. & Ont.	177,828	166,402	140,776	167,871
Chi. & Alton	702,635	856,398	715,956	861,169
Han. & St. Jo	192,240	262,200	179,959	262,948
12 roads	$5,470,916	$6,079,266	$6,092,674	$6,743,872

Beginning with the aggregate, which may be presumed to represent the general course of railroad earnings west of Chicago, we find that last year the 12 roads earned $608,350 (11 per cent.) more in August than in July; this year $651,198 (10.7 per cent.) more; that is, the progress from July to August was almost exactly the same both years for the whole group of roads. There are considerable differences in individual roads. The increase of August over July was $81,000 last year and $22,000 this by the Milwaukee & St. Paul, $152,000 last year and $282,000 this by the Northwestern; $20,000 last year and $5,000 this by the Iowa lines of the Illinois Central; $70,000 last year and $83,000 this by the Hannibal & St. Joseph; while the Marquette & Ontonagon earned $11,000 *less* in August last year and $27,000 *more* this year than in July.

We will now compare the aggregate mileage, earnings and expenses per mile in August of this group of roads this year and last. All of them except the Iowa lines of the Illinois Central show some increase this year, but in most cases it is not very large, and in none is it large in proportion to mileage. The aggregates of these 12 roads were:

	1883.	1882.	Increase.	P. c.
Miles	12,825	11,870	955	8.0
Total earnings	$6,743,872	$6,079,266	$664,606	10.9
Earnings per mile	524	512	12	2.4

We have come to that point now when the increase of mileage in this great territory is not so great as it has been heretofore. It is not so great as the increase in earnings, we see, so that there was a small increase in earnings per mile.

These roads were not much affected in August by the new harvest. Only two of them, the Chicago & Alton and the Hannibal & St. Joseph, are where there is much winter wheat, and the increase on these two is extremely small.

The roads west and southwest of St. Louis and west of the Mississippi, of which 12 report, all made gains over last year except the International & Great Northern and the St. Louis & San Francisco. The aggregates are:

	1883.	1882.	Increase.	P. c.
Miles	7,697	7,173	524	7.3
Total earnings	$4,054,657	$3,681,937	$372,720	10.1
Earnings per mile	527	513	14	2.7

The rate of increase in mileage here again is less than that in earnings, and there is a small increase in earnings per mile. These roads depend largely upon the cotton crop. August was the close of a very bad cotton year last year, but then it was known that all crops on these lines would be good that year; this year nearly the reverse is the case. August was the end of an extraordinarily good crop year on these roads, but it was then probable and nearly certain that this year the production would be much less. Below we compare the earnings in July and August of the principal roads in this group, and the aggregate of the 12 this year and last:

	1882.		1883.	
	July.	August.	July.	August.
Cen. Branch	$57,960	$93,389	$93,852	$144,665
Mo. Pacific	734,008	908,738	704,734	953,916
St. L. & San Fran.	318,613	381,637	280,020	369,520
Ft. Scott & Gulf	135,337	158,052	142,501	182,600
Four grain roads	$1,245,918	$1,541,816	$1,221,107	$1,650,701
Mo. Kan. & Tex.	482,384	625,424	590,649	710,419
Iron Mt.	515,519	675,980	585,590	747,709
Texas & Pac.	379,451	452,155	537,743	556,556
Int. & Gt. North	223,256	298,070	269,052	297,838
Eight cotton roads	$1,669,804	$2,140,121	$2,065,781	$2,403,958
Twelve roads	2,915,782	3,681,937	3,286,888	4,054,659

In the aggregate the four grain roads, as we have called them, which derive their traffic chiefly from Missouri and Kansas, and get little from the country further south, earned a little less this year than last in July, though the country there was full of corn this year, and almost bare of it last year. Last year Kansas first had supplies of wheat and oats to market, coming forward freely first in August, when there

was an unusually strong demand for them. We see that the four roads made a gain of $296,000 (24 per cent.) from July to August last year, and this year one of $430,000, or 35 per cent. We regard it as more remarkable that the July earnings should have been so small this year than that the August earnings should have been so large. The progress from July to August was very great by all four of these roads both this year and last, the largest this year on every one.

The four leading cotton roads whose names we give made an increase from July to August of $396,000 (24 per cent.) last year and of $338,000 (16½ per cent.) this year, making greater progress last year, as was to be expected, as they started from a low basis then and from a high one this year.

Taking the whole group together there was a gain of $766,000 (26 per cent.) last year and of $768,000 (23¼ per cent.) this year—very nearly the same both years, the better progress of the grain roads counterbalancing the smaller gains of the cotton roads.

In the South east of the Mississippi there are no less than 22 roads that report earnings for August, whose aggregate mileage and earnings and average earnings per mile were :

	1883.	1882.	Increase.	P. c.
Miles	10,040	9,971	369	3.8
Tot .l earnings...	$4,398,335	$3,801,281	$597,054	15.7
Earn. per mile...	438	393	45	11.5

Thus these roads south of the Potomac and the Ohio make an extraordinarily good showing, the gain in earnings per mile being no less than 11½ per cent. These roads have increased their mileage much less than any other group. As in the case of the Southwestern roads August was for them the last month of perhaps the best crop year the South has ever had.

We will now compare the earnings of this group of roads and of a few of the separate roads in July and August of the two years.

	1882.		1883.	
	July.	August.	July.	August.
22 roads.....	$3,484,505	$3,801,281	$3,868,666	$4,398,335
Ill. Cen., So. Div..	$222,659	$236,585	$240,625	$281,883
Mobile & Ohio.....	135,173	137,475	136,836	157,950
Louisville & Nash.	1,063,765	1,043,911	1,139.300	1,230,900
Cin , N. O. & T. P.	223,168	228,334	228,358	241,133
Nash. & Chat	186,495	189,787	195,468	216,658
E. Tenn., Va. & Ga	230,339	289.287	298,134	341,639
Norfolk & W	195,535	222.161	219.188	261,711
Rich. & Danville..	244,380	296,717	272,282	317,595
Do. control'd lines.	218.681	267.629	259,137	328,808
Ches. & Ohio.....	316,787	381,454	336.475	382,114
So. Carolina.....	68,461	79,822	75,044	85,854

In the aggregate there was an increase of $316,776 (9 per cent.) from July to August last year and one of $529,729 (13⅜ per cent.) this year—much better progress this year. The good crops of 1882 have apparently had a lasting effect, and the fact that there has been a much smaller addition of railroad mileage there than in the Northwest or the Southwest is greatly to the advantage of the southern roads, which should be in good condition now to bear whatever reduction in traffic may be caused by the poorer crops of this year. Every one of these 22 roads except the Louisville & Nashville had larger earnings in August than July last year: all without any exception this year. The gains in August over July were $14,000 last year and $41,000 this on the Southern Division of the Illinois Central, $2,300 last year and $21,000 this on the Mobile & Ohio, $3,300 last year and $21,000 this on the Nashville & Chattanooga, $53,000 last year and $43,500 this on the East Tennessee, $26,600 last year and $42,500 this on the Norfolk & Western, and $65,000 last year and $46,000 this on the Chesapeake & Ohio. Altogether last August was an extremely favorable month for these roads, and every one of them earned more than last year.

In the group of roads north of the Ohio, east of the Chicago & Alton road and the Mississippi, and west of Pennsylvania, including also the Wabash with a large mileage the other side as well as on this side of the Mississippi, there are 22 roads that report, which in August for the last two years had the following :

	1883.	1882.	Inc. or Dec.	P. c.
Miles.....	10,764	10,087	Inc. 677	6.7
Total earnings...	$5,459,555	$5,309,914	Inc. $149,641	2.8
Earn. per mile...	507	526	Dec. 19	3.6

Among these roads are several that feel in August the effect of the new winter wheat crop, as the Wabash, the Ohio & Mississippi, the Terre Haute Main Line and Belleville Line, the Cincinnati, Washington & Baltimore, the Evansville & Terre Haute, the Illinois Central, and the Peoria, Decatur & Evansville. They had an active movement from an enormous crop last year, and a light movement from a poor one this year. On the other hand, they had scarcely any corn to carry last year, and a considerable amount this year. But on most of these roads, which are chiefly small ones, the crop movement affords but a very small part of their earnings, and on many it does not have a great *direct* effect on their business, this district being full of other industries, and only less productive in manufactures than the East. The roads here have made, as a whole, an unsatisfactory showing for several months. There are too many of them ; and the most important and thriving roads of this territory do not report.

In the aggregate they show a decrease of 3.6 per cent. in earnings per mile, which is not very bad, but not so good a showing as is made by the roads in the other groups. The Wabash has about one-third of the mileage and earnings of this system. Its increase in total earnings is but a trifle in August and in earnings per mile it shows a decrease from $526 to $506—almost exactly the same as the average, so that the tendency shown would be the same if it were omitted.

Three of these roads—the Ohio & Mississippi, the Toledo, Cincinnati & St. Louis and the Evansville & Terre Haute, did not report for July. The other 19 had a decrease of $358,412 in aggregate earnings compared with last year, while they made a *gain* of $101,887 in August, so if the comparison is not very favorable in the latter month, it is much more so than in July.

The aggregate earnings of these 19 roads in July and August this year and last were :

1882.		1883.	
July.	August.	July.	August.
$3,884,452	$4,656,935	$3,526,040	$4,758,822

The increase from July to August was $772,483 (20 per cent.) last year and $1,232,782 (35 per cent.) this year, so again we see, and this in the least favored group, the great progress was made this year.

We have reports from ten roads east of Ohio and north of the Potomac for August, but of these the Reading includes the whole of the leased Central, of New Jersey, this year, and there is nothing to offset it last year. We therefore give the aggregate of the other nine only, as follows :

	1883.	1882.		
Miles	6,085	5,801	284	5.0
Total earnings	$8,253,327	$7,981,117	$272,210	3.4
Earn. per mile.... ...	1,356	1,376	20	1.5

Thus in the aggregate these roads have a slight decrease in earnings per mile. The Northern Central was the only one that had a decrease in total earnings. The Pennsylvania and the Grand Trunk are the roads most affected by the condition of trunk-line business. The Grand Trunk has a trifling increase, the others a decrease in earnings per mile. The changes are not great, however.

The course of earnings from July to August on these roads is shown below :

1882.		1883.	
July.	August.	July.	August.
$7,088,478	$7,981,117	$7,184,573	$8,253,327

Last year they earned $892,629 (12½ per cent.) more in August than in July ; this year $1,068,754 (15 per cent.) more ; so here also the improvement is greatest this year. This is the case with all of these roads except the Northern Central, whose gain over July was $141,000 last year and $913,000 this.

We now turn to the far West, where we miss the Atchison, Topeka & Santa Fe, but in place of its 1,820 miles have the 280 of the Utah Central. This with the Union Pacific, the Denver & Rio Grande and the Central Pacific make the following showing :

	1883.	1882.	Inc. or Dec.	P. c.
Miles...	9,338	8,196	Inc. 1,142	14.0
Total earnings.....	$5,693,086	$5,807,434	Dec. $114,348	2.0
Earn. per mile.....	610	709	Dec. 101	14.4

There is a decrease on every road except the Denver and Rio Grande, which with an increase of 47 per cent. in miles made a gain of 17¼ per cent. in earnings. The Utah Central, which has not reported before, shows that the decline in earnings in the Far West has been general, although in its special case it was doubtless increased by the competition of the Denver & Rio Grande's new Utah line, which meets it where its traffic has heretofore been greatest. The decrease in earnings per mile is serious on all these roads except the Central Pacific, and this may indicate that the reduction does not extend to California.

We have not the earnings of the Utah Central for July. Those of the other three roads in July and August have been:

1882.		1883.	
July.	August.	July.	August.
$4,866,048	$5,686,557	$4,928,000	$5,599,500

Last year their gain from July to August was $820,509; this year, $671,500. Here alone do we find that the improvement in August was less than last year.

Below we give our usual table of earnings per mile for six successive years:

AUGUST EARNINGS PER MILE OF ROAD FOR SIX YEARS.

	1878.	1879.	1880.	1881.	1882.	1883.
Ala., Gt. Southern		$120	$202	$235	$254	$311
Burl., C. R. & Nor.....	$241	283	326	371	349	326
Central Iowa	292	....	419	521	336	300
Central Pacific.....	821	664	805	753	763	740
Chesapeake & Ohio		496	596	604	737	739
Chicago & Alton.....	831	695	906	916	1,008	1,013
Chica. & E. Ill.....	542	473	599	711	697	650
Chic., Mil. & St. Paul...	357	336	319	442	355	407
Chic. & N. W.....	603	579	685	801	665	681
Chic.,St.P.,Minn. & Om. ...		324	314	393	406	381
Cin., N. O. & Tex. Pac.. ...		....	443	678	680	718
Cleve , Akron & Col....	219	187	244	253	296	356
Denver & Rio Grande ..	358	274	777	648	507	405
Des Moines & Ft. Dodge. ...		347	337	613	336	268
Det., Lansing & Nor.... ...		567	473	583	596	664
Eastern		880	944	1,073	1,185	1,404	1,508
E. Tenn., Va. & Ga.....	315	. ..	244	282	321	320
Evansville & T. H	...	....	....	400	654	574
Flint & Pere Marquette. ...		316	410	495	479	587
Hannibal & St. Joseph..	733	485	815	720	898	901
Ill. Cen., in Ill.....	701	579	648	732	747	695
Ill. Cen., in Iowa.....	256	267	343	488	399	380
Ind., Bloom. & West...	586	507	550	490	401	460
Int. & Gt. Northern	224	233	274	407	385	361
Lake Erie & Western...	...	223	353	433	440	386
Long Island.....	...	....	....	891	1,011	1,081
Louisville & Nashville..	441	401	481	476	515	595
Marq., H. & Ont.....	...	....	....	1,761	1,715	1,630
Mo., Kan. & Tex.....	375	389	376	513	481	517
Mobile & Ohio.....	227	210	278	318	260	299
Nash., Chat. & St. L....	372	407	372	456	352	391
N. Y. & New Eng.....	...	....	791	788	868	945
Norfolk & Western.....	362	315	421	458	519	520
Northern Central.....	993	971	1,392	1,528	1,944	1,824
Northern Pacific.....	...	328	309	576	559	528
Pennsylvania...	1,664	1,593	1,989	1,975	2,391	2,307
Peoria, Dec. & Ev.....	...	....	238	348	298	301
Phila & Reading	1,523	1,579	1,811	2,013	1,976	2,268
Richmond & Danville..	286	304	339	389	392	420
St. L., A. & T. H. :						
Main line	...	542	773	644	855	657
Belleville line.....	623	616	546	526	727	590
St. Louis & Cairo.....	143	180	272	237	214	260
St. Louis & San Fran...	368	404	452	443	578	493
St. L., Iron Mt. & So....	509	589	826	941	850	826
St. P. & Duluth	...	....	....	417	544	664
St. P., Minn. & Man....	...	339	255	479	758	466
Texas & Pacific	373	416	430	434	321	368
Toledo, Cin. & St. L....	. .	....	109	181	185	154
Union Pacific..	...	. ..	626	705	745	612
Wabash, St. L. & Pac..	...	..	615	622	526	506
West Jersey.....	677	624	....	1,071	1,126	1,149

Taking the whole country, we find that the comparison of August earnings with last year's is favorable in the South, quite favorable in the Southwest, fair in the East, not good but not very bad in the Central territory north of the Ohio, fair in the Northwest, and decidedly bad in the Far West. But everywhere except in the Far West August showed a much larger gain over July this year than last, and this is a decidedly favorable feature.

For the eight months ending with August our table has reports from 78 different railroads with 59,369 miles of road this year, and 5,935 miles, or 11.2 per cent. more than last year. These 78 roads had in the aggregate $260,998,509 of gross earnings, which is $22,801,800, or 9.6 per cent. more than last year. Their average earnings per mile of road, however, *decreased* from $4,458 to $4,396, or 1.4 per cent.—a very small amount considering the very large increase of road, though it must be borne in mind that this great increase of road has been going on now for several years, so that every year there is a great addition of road that has had time to develop earnings as well as of that which has not, and the *proportion* of new road is perhaps not greater than last year and some other years. Of the 78 roads only 16 have any increase in total earnings, but 30 have a decrease in earnings per mile. There are 10 roads which have an *increase* of more than 20 per cent. in earnings per mile, and but six that have a *decrease* of as much as 15 per cent , the greatest being :

The Carrying Capacity of Freight Cars.

A great deal has been said and done during the past few years with reference to increasing the loads which freight cars carry, and generally on nearly all railroads more lading is carried in cars now than heretofore, even when there has been no addition made to their size or strength. In fact the carrying capacity of a great many cars has been increased from 20 to 50 or more per cent., through the instrumentality of a paint brush. That is, cars which were originally constructed and intended to carry, say ten tons, were quickly and easily altered to carry heavier loads simply by changing the figures after the word "capacity" painted on the outside. The survival of the fittest soon led to the destruction of the weaker cars, or those not fit to carry the loads which had often thus increased in a purely arbitrary way without reference to the strength of the vehicle.

The increasing traffic of the roads made it desirable that more lading should be carried and therefore more was put into the cars, and they were compelled to do the service as best they could.

But even when the construction of cars for carrying greater loads has been changed, and their strength increased, it is doubtful whether in most, or perhaps any cases, proper consideration has been given to the principles which determine their actual capacity for resisting the wear and tear, the shocks and the strains to which they are subjected. That proper consideration has not been given to the laws of construction is indicated in the report of the Master Car-Builders' Association's committee on "the most economical carrying capacity for freight cars," read at their last annual convention. In that report the Committee say that "it is the opinion of a large majority of those who have sent replies to the Committee's circular, that the cost of repairs to freight cars has been increased to a considerable degree since the loads they carry have been increased." Unfortunately neither those who furnished information to the Committee nor the members of the Committee were able to determine whether the increase in cost

was greater or less than the increase in loads carried. If cars or other vehicles of a large carrying capacity are properly constructed, the cost of their repairs ought to be less in proportion than the increase in the loads carried. To prove this it is only necessary to refer to ordinary experience. The repairs of two one-horse wagons will cost more than those of one two-horse vehicle of the same kind, and it will not cost four times as much to keep one for four horses in repair as it would to maintain four for one horse each. There is a number of reasons for this, among which is the fact that the expense of maintenance of a great many parts, of both wagons and cars, is either smaller in proportion to their capacity or is quite independent of it. Thus the roof and floor area of a car is not in proportion to what it carries, but is probably about as the square root of the loads. The same thing is true of the outside boarding or sheathing and painting of box-cars. The repairs of running-boards, ladders, handles, steps, etc., is almost or quite independent of the capacity. While there is probably more wear on brakes on cars which carry heavy loads, yet the maintenance of the rods, shafts, wheels, ratchets, pawls, etc., is affected very little by the loads carried. The same argument will apply to other parts, which need not be enumerated.

On the other hand, there are some parts the repairs of which are increased very much more rapidly than the loads, if those parts are not strong enough to resist the strains to which they are subjected by the weight carried. Thus, supposing the capacity of old cars, with weak draw-gear, is augmented by the use of a paint brush, and that one of these cars loaded is standing on the track and another is "dropped down," as brakemen and switchmen euphemistically term the more or less violent collision of one car against another in making up trains—in such a case, if these cars are heavily loaded the draw-gear of both is liable to be demolished, and a heavy bill for repairs is thereby incurred. The large number of failures of wheels during the past winter, which were not strong enough for the loads carried, is another illustration of the same thing, and the process of "all going to pieces," as master car-builders describe the general deterioration and failure of cars, also illustrates what will occur when the strength of cars is not equal to the service they must perform.

These considerations lead to the conclusion that the cost of repairs, in proportion to the freight carried, will be lessened by increasing the capacity of cars, provided their strength is correspondingly increased, and that the proportionate cost of repairs will be greater, if the strength of the vehicles is not adequate to carry the loads.

But in determining the load which freight cars should be made to carry, the question should be regarded from another point of view. Ordinary experience teaches us that there are absolute and economical limitations which determine the size of various kinds of structures. There is a width of span over which no bridge could be built and sustain its own weight. Although the conditions which a structure like a car must fulfill are not identical with those of a bridge, yet some of them are common to both structures.

Any one who has ever traveled over muddy roads knows the difficulty of hauling a large and heavily loaded wagon over them. Light wagons and light loads alone are possible in such service. On a turnpike road larger vehicles and heavier loads are possible, but probably even in the old pre-railroad days no teamsters would have undertaken to haul even on a turnpike road with any number of horses, a vehicle weighing as much as a modern freight car and its load. On some of the early, and some of the present, unballasted railroads it would also be difficult if the speed was high. It may be assumed then that as roads are improved in solidity and smoothness, the loads which can be hauled may be increased. But in this a limit is soon reached, as there is not much probability that any very great improvement will be made, or is possible, in the perfection of the permanent way of railroads over that which has already been attained on the best roads. The questions for consideration then, are first how large a car-body can be economically used, and second what is the greatest economical weight which can be placed on a four-wheeled truck, both the body and the truck being made of the present form of construction.

In the discussion of this question at the Master Car-Builders' Convention, Mr. Wilder, Superintendent of Machinery of the New York, Lake Erie & Western Railroad, said:

"In regard to the increased carrying capacity of cars, it seems to me that we are running to pretty nearly the limit we can put on one vehicle. It is very hard work to get most of the freights offered to us into one of our 33-ft. cars in a load of over 40,000 lbs., and we must increase the length of the cars if we carry more weight. I have had occasion to look into that matter very thoroughly, and with most of the different kinds of staple goods that are forwarded—pork, lard and grain. You must load the present car very nearly to the roof before you can get 40,000 lbs. into it. Of course, with coal, iron ore, pig iron and other materials of that kind, the load which can be carried in one of those cars is not so limited."

One of the old box-cars used ten years ago and intended to carry ten tons or 20,000 lbs. of lading was about 26 ft. long, with an inside capacity of about 1,200 cubic ft., or 120 ft. per ton. The bodies of the present standard 20 ton (40,000 lbs.) box cars of the New York Central Railroad are 34 ft. long outside, and have about 1,600 cubic ft. of capacity inside, or 80 ft. per ton. This then, according to Mr. Wilder, is about the smallest amount of cubical capacity that can be given to box cars, and have room enough for ordinary lading. The outside width of the bodies of these cars is 8 ft. 6 in. Probably few experienced railroad men would advise the use of car bodies wider than this, and on most roads no greater height is permissible. Therefore any increase in the cubical capacity of such cars must be obtained by adding to the length of their bodies; so that if a 20-ton car is 34 ft. long, a 30-ton car should be 51 ft. long. It must be kept in mind that a car-body which rests on a truck near each end is a structure subjected to statical strains similar to those which a bridge must resist, and therefore that its strength and weight will follow somewhat the same laws which govern the strength and weight of bridges; in other words, its weight to have the same strength must be nearly in proportion to the square of the span. As the centres of the trucks are about 5 ft. from the end of the car body, the span over which the 34-ft. car extends is 24 ft., and that of the 51-ft. car would be about 40 ft., so that if their weights follow the law of bridges they would be $24 \times 24 = 576$ is to $40 \times 40 = 1{,}600$. It is of course true that the weight of all the parts of a car body would not follow this law, but those portions which sustain the load would, so that if the body is properly proportioned it will be essential that its weight be very much increased. Of course the addition to the load will make heavier draw-gear necessary, and all the parts which must resist shocks or oscillations must be stronger. All of the car body excepting roof, outside sheathing and the attachments for facilitating the movements of the men should be increased in strength and weight at least in proportion to the addition to the load, and those parts which sustain the body should be increased in a larger proportion. A 34-ft. box freight car weighs about 20,000 lbs. The trucks weigh 4,600 each, so that the car body weighs 10,800 lbs. Assuming that one-half of its weight follows the law of bridges and that the other half is increased in weight in proportion to the increase in length and we would have

$$\frac{5{,}400 \times 1{,}600}{576} = 15{,}000 \text{ lbs., and}$$

$$\frac{5{,}400 \times 51}{40} = 6{,}885 \text{ lbs.}$$

Total.....21,885 lbs.

A car body to carry 30 tons will then be about twice as heavy as one for a 20-ton car, and the body and the load must be carried on two four-wheeled trucks, unless some new departure is made from the existing and common type of construction.

The trucks of a 34-ft. car which carries 40,000 lbs. of freight are, according to the preceding figures, each loaded with 25,400 lbs., and those of a 51-ft. car, to carry 60,000 lbs. must each carry 40,942 lbs. There is abundant evidence which indicates that there is a deficiency rather than an excess of strength in the trucks of the 34-ft. car, so that before loads of 60,000 lbs. can be safely carried, these trucks must be proportionally increased in strength. The increase in weight would probably be very nearly in proportion to the loads to be carried, so that we would have

$$\frac{4{,}600 \times 40{,}942}{25{,}400} = 7{,}414 \text{ lbs.}$$

as the weight of one truck for a 30-ton car. Its whole weight loaded would therefore be 96,713 lbs., which would bring a load of a little over 12,000 lbs. on each wheel. The question will then come up whether cast-iron wheels can be made to carry such loads safely. It is true that cast-iron tires were successfully used for years on the Baltimore & Ohio and some other railroads, under locomotives with loads per wheel very nearly or quite equal to this. The wheels were seldom less than 46 in. in diameter and many were of larger size. Experience has shown that there is much difficulty in making solid cast-iron wheels larger than 33 in. diameter, so that the indications are that if loads as heavy as 12,000 lbs. per wheel are adopted, steel-tired wheels must be used, and probably it will be necessary to make these of larger size than 33 in. in diameter in order to get them to stand the service.

The journals to carry the increased loads must of course be increased in proportion. If we take a journal $3\frac{1}{2} \times 7$ in. as the smallest that is admissible for cars of 40,000 lbs. capacity, and the bearing surface to be equal to the horizontal section of the journals, we have $3\frac{1}{2} \times 7 = 24\frac{1}{2}$ sq. in. As the journals of the 40,000-lb. car are each loaded with 7,500 lbs., and those of the 60,000-lb. car with 12,000 lbs., the bearing surface of the journals for the latter should be

$$\frac{24\frac{1}{2} \times 12{,}000}{7{,}500} = 39.2 \text{ sq. in.}$$

If the same proportion, of length equal to double the diameter of journal, is maintained, we shall require a journal $4\frac{1}{2} \times 9$ in. to give the required area of bearing surface.

The risks of handling vehicles weighing nearly 100,000 lbs. will be greater than they are with lighter cars. This indicates that more care must be taken in the quality of the material used, that the design should be worked out more skillfully and that the workmanship ought to be of a superior quality.

The conclusion then is, that while it may be advisable for some kinds of traffic to adopt cars to carry loads as heavy as 60,000 lbs., yet if such cars are used, it will be essential to make some very radical changes in construction, and that if the step is taken it should first receive very careful and thorough consideration.

At the last convention of the Master Car-Builders' Association the following resolution, introduced by Mr. Goodwin, was adopted:

Resolved, That a committee of seven be appointed representing the largest car-owing roads who send members or representatives to the Master Car-Builders' Convention, said committee to confer together and if possible agree upon a standard house car with details of all parts, whose maximum load shall be 60,000 lbs.; said committee to report to the Executive Committee, and the Executive Committee, when ready to report, to send a copy of the report to each member of the Association for examination; the Executive Committee to report at the next annual meeting."

This committee has been appointed and its work will be anticipated with much interest.

The St. Paul, Minneapolis & Manitoba.

There has been, perhaps, no instance of the rapid growth of a new railroad to great prosperity, in recent years, equal to that of the St. Paul, Minneapolis & Manitoba. When it succeeded the defunct and long worthless St. Paul & Pacific, in 1879, it had a property which made but very slight returns on the capital invested in it. The line from St. Paul to Breckenridge, 207 miles, which was completed in 1871, and went into a receiver's hands in 1873, had earned net from $33,000 to $237,000 from 1873 to 1878, inclusive, and its traffic scarcely grew at all in this time, while the interest in the bonds secured by it was about $600,000. The part of the line in the Red River Valley then completed, 122 miles, earned $45,700 net, this in the very choicest part of this choice valley, today famous as perhaps the finest wheat-growing country then, and famous even then. Altogether the 440 miles of road that afterwards became the Manitoba earned in the year to June 30, 1878, $1,124,769 gross and $473,977 net, while the interest charge of only 282 miles of it was $853,000. That is, there were gross earnings of $2,556 and net earnings of $1,077 per mile.

After the foreclosure and the purchase by the present company it at once extended the Red River line to the Dominion border, and completed the partly built northern loop from Alexandria to Barnesville, and just about at that time the immigration into the Red River Valley and to Manitoba began on a great scale, as it has continued. Substantially all the government lands and most of the railroad land near the lines of the railroad in the Red River Valley were taken, and the company began to construct a system of branches planned so as to occupy the whole of this valley as far north as the Dominion border. In the year to June 30, 1880, it worked an average of 656 miles of road, and earned $4,400 per mile gross and $2,600 net with it. The rush to Manitoba increased, all of which and all the supplies for that country and for the rapid construction of the Canadian Pacific Railway in it had to pass over the whole length of the St. Paul, Minneapolis & Manitoba Railway. So in this year to June 30, 1881, with an increase of 7 per cent. in the average mileage worked, the gross earnings rose to $5,200 and the net to $2,716 per mile. The next year, having proved the value of the country for traffic, the company pushed its lines for the occupation of the Red River Valley, and added no less than 22 per cent. to its average mileage worked; but the growth of the country was then at its height, the Canadian Pacific required more transportation than ever, and the Man-

itoba road still had it all, and then (year to June 30, 1882), its average earnings per mile were $7,160 gross and $3,573 net—more than many old roads with heavy traffic and paying good dividends—more than the Chicago, Burlington & Quincy, more than on the Chicago & Northwestern, and 50 per cent. more than the Chicago, Milwaukee & St. Paul.

Meanwhile the rush of immigration had not only given it large earnings, but made a good market for its lands. In the three years just reviewed the cash receipts for its land department over expenses were about $1,820,000.

It was not till about the close of this fiscal year 1881-82 that it began to be generally known that this new frontier road was enjoying great prosperity. It began dividends then, paying 6½ per cent. within the year.

The last fiscal year, an abstract of the report from which was published in our issue of Sept. 21, was in every respect as favorable as the previous one had been until the Canadian Pacific line from Lake Superior to Winnipeg was opened for traffic last spring. This at once diverted part of the ordinary freight and travel going to Manitoba, and nearly all the Canadian Pacific construction freight, which was carried by steamboat to Port Arthur and thence forwarded over the Canadian Pacific's own line. The falling off of earnings that has resulted indicates that this was an important traffic. It affected, however, but a few months of the fiscal year covered by the report. Then, as the year before, most extensions were made, and the average mileage worked was increased nearly one-third, nearly all in exceptionally fertile wheat country and chiefly in the Red River Valley, which at the close of the year this company had occupied almost completely, the only other road there being the Northern Pacific's main line directly across it, and one of its branch lines diagonally across the Dakota side of it. There is probably more productive wheat land on the Manitoba's line in the Red River Valley alone than there is on the Northern Pacific's main line from Duluth to Oregon, though this is hardly a fair comparison, as the Northern Pacific will probably have more such land on its branches than on its main line, and we include the Manitoba's branches in our estimate. At the close of the year it had 1,350 miles of road and very little under construction. Though the country on its lines has grown with astonishing rapidity, it is still thinly peopled, and but a small fraction of the land has been brought under cultivation as yet.

In this last fiscal year the gross earnings were $7,605 and the net earnings $3,785 per mile—considerably more than in the previous year. Last year for some months the earnings were swelled by extraordinary shipments of Canadian Pacific, against which is to be set the withdrawal of this traffic last spring. This was in its nature a temporary traffic, but the competition of the Canadian Pacific for the general Manitoba traffic will be permanent, and more rather than less hereafter than heretofore, as the company will some day have a through rail outlet to Montreal, and Manitoba will probably have much closer relations with Canada than with our seaboard.

Against this loss, whatever it may be (and it probably will be considerable), the Manitoba Company will have the growth of the rich country on its new lines. As this has been settled to any extent only for a few years, it is impossible to believe that it has done growing, or more than fairly begun to produce. It is exceptionally productive, and most of it the Manitoba has entirely to itself. If then it should not earn at the same rate this year as last, it would seem that it must soon much more than recover. The last harvest will perhaps not tell much upon the earnings in September, but will be felt fully in October. The increase in area cultivated this year could be felt very little heretofore, it should be unmistakable hereafter.

So far the decline continues, though the company now works 1,350 miles of road, against 912 last year. In two months and three weeks since the close of the last fiscal year the earnings were $1,760,359 this year, against $2,231,536 last, a decrease of $471,177, or 21 per cent. But this takes only about to the close of the last crop year. The movement from the new crops now about to come forward may put a different phase on the reports. Indeed, the last weekly report, that for the third week of September, showed a trifling increase in earnings. Further, though the crop in the Red River Valley this year is not a good one for the Red River Valley, it would be a large yield almost anywhere else and must be reasonably profitable to the farmers. This makes probable a continuance of immigration and a considerable addition to the acreage under cultivation next year.

It does not appear, then, that the decrease in earnings is a matter for alarm, as indicating an arrest of development in the country served by this road. It is return to a normal condition of things after an abnormally favorable period, made so by the monopoly of the Manitoba traffic and the heavy Canadian Pacific construction freights. The country on the lines of the Manitoba road continues to grow, and has taken no steps backward.

Record of New Railroad Construction.

This number of the *Railroad Gazette* contains information of the laying of track on new railroads as follows:

Boston, Hoosac Tunnel & Western.—Extended from near Schenectady, N. Y., southwest to Rotterdam Junction, 7 miles.

Cape Fear & Yadkin Valley.—Extended from Gulf, N. C., northwest 8 miles.

Chicago, Fairchild & Eau Claire River.—Track laid from Fairchild, Wis., east by north 13 miles.

Chicago & Great Southern.—Track laid from Pine Village, south to Attica, 12½ miles.

Chicago & Northwestern.—The *Sioux River Branch* is extended from Castlewood, Dak., north by west to Watertown, 18½ miles.

Chicago, St. Paul, Minneapolis & Omaha.—A branch is completed from Wakefield, Neb., northwest to Coleridge, 24 miles.

Columbus & Eastern.—Track laid from Hadley Junction, O., east 11 miles.

Corning, Cowanesque & Antrim.—The *Cowanesque Valley Branch* is extended from Westfield, Pa., west to Harrison Valley, 6¼ miles.

Cornwall & Lebanon.—Completed from Lebanon, Pa., south and southwest to Conewago, 22 miles.

Denver & Rio Grande.—The *Maysville Branch* is extended from Maysville, Col., westward to Garfield, 9 miles. Gauge, 3 ft.

Galveston, Sabine & St. Louis.—Track laid from Wilkins, Tex., south to Waldron Mills, 3 miles.

Jacksonville Southeastern.—Extended from Smithboro, Ill., southeast to Centralia, 29 miles.

Milwaukee, Lake Shore & Western.—Extended from Eagle River, Wis., north to Bass Lake, Mich., 39 miles.

Northern Pacific.—The *Puget Sound Shore Line Branch* has track laid from near Puyallup, Wash. Ter., north to Black River, 21 miles.

Oregon Railway & Navigation Co.—The *Baker City Branch* is extended from Mikecha, Oregon, southeast to Meacham, 28 miles.

St. Paul, Minneapolis & Manitoba.—The *Moorhead Northern Branch* is completed from Moorhead, Minn., northward to Holstad, 35 miles.

This is a total of 286½ miles of new railroad, making 4,281 miles thus far this year. The total new track reported in our columns to the corresponding date for 12 years past has been as follows:

	Miles.		Miles.
1883	4,281	1877	1,505
1882	7,589	1876	1,719
1881	5,634	1875	761
1880	3,938	1874	1,125
1879	2,378	1873	2,867
1878	1,420	1872	5,066

The statements include *main track only*, no account being taken of second tracks or other additional tracks or sidings.

The construction for the year has now passed 4,000 miles; it has been exceeded in only three years of the twelve—1882, 1881 and 1872. The new road built this year will probably equal the record of 1881 very nearly.

CHICAGO THROUGH RAILROAD SHIPMENTS EASTWARD by the eight roads for the week ending Sept. 21, by the complete reports, have been as follows for the past four years:

	1880.	1881.	1882	1883.
Tons	33,841	63,855	35,611	44,296

The shipments this year are a fourth more than last year, and a third more than in 1880, but nearly 30 per cent. less than in 1881, when rates were about half as high as now. But 5,802 tons of the shipments were by the Chicago & Atlantic this year, and 4,709 by the Nickel Plate, which were not open till this year, so that the six old roads carried but 33,784 tons, which is less than last year and nearly the same as in 1880.

The percentage of the total shipments carried by each road this year and last in this week to Sept. 21, and this year in each of the three weeks next preceding, has been:

	C. & G. T.	Mich. Cen.	Lake Shore	Ft. Wayne	C., St. L. & P.	B. & O.	Chic. & At.	N. Y. C. & St. L.
1883	8.3	13.8	14.7	29.1	8.9	10.5	13.1	10.6
1882	11.6	23.7	17.9	21.9	10.5	7.2	....	....
1883. Week to								
Sept 14	10.0	12.8	14.9	21.7	9.0	6.3	14.7	10.6
" 7	8.7	13.7	14.4	20.0	12.1	6.6	17.2	7.3
Aug. 31	11.8	10.2	15.2	21.0	17.7	6.6	13.5	4.0

The Grand Trunk has an unusually small percentage the last week; the Michigan Central and the Lake Shore show little gain over preceding weeks; the Chicago, St. Louis & Pittsburgh is much below its percentage through the summer; the Chicago & Atlantic has a smaller proportion than it has had usually; the Nickle Plate a much larger one than usual, though no more than the week before; and the Baltimore & Ohio also has a larger proportion than usual.

For seven successive weeks the Chicago shipments have been:

Week ending—						
Aug. 7.	Aug. 14.	Aug. 21.	Aug 31	Sept. 7.	Sept. 14.	Sept 21.
33,487	32,432	38,500	39,165	46,947	49,731	44,296

Thus the shipments, which increased from July for six weeks fell off 5,435 tons (12 per cent.) in the third week of September. It has been the case in some other years that receipts culminated about the first week of September and then fell off, increasing again in October and November.

For the week ending Sept 29 the incomplete report of through and local shipments eastward from Chicago of flour, grain and provisions by these eight roads makes the total 44,091 tons, which is 4,253 tons less than the same incomplete report gave for the preceding week. The percentages are not likely to be the same as shown by the complete report, which will not appear for more than a week, perhaps; but it will approximate to them, and we give them with the caution that they are subject to correction, as follows:

	Per cent.		Per cent.
Chic. & Grand Trunk	12 7	Chic., St. L. & Pitts.	8.0
Mich. Central	13.1	Balt. & Ohio	9.9
Lake Shore	18.9	Chic. & Atlantic	11.6
Fort Wayne	15.9	Nickel Plate	9.9

Compared with the correct percentages for the week to Sept. 21, above, we find a gain in percentage of 4.4 by the Grand Trunk and of 4.2 by the Lake Shore, balanced by a loss of 4 2 by the Fort Wayne, of 1.5 by the Chicago & Atlantic, and by smaller losses, ranging from 0.6 to 0.9, on the other four roads. The decrease by the two Pennsylvania roads since the last meeting of the Joint Executive Committee has been very great, and that of the Chicago & Atlantic considerable, but what they have lost has not been gained chiefly by the Michigan Central and the Lake Shore, but by the Nickel Plate and the Baltimore & Ohio.

BREADSTUFFS EXPORTS IN AUGUST have been reported as follows by the Bureau of Statistics:

	1883.	1882.	Inc. or Dec.	P.c.
Flour, bbls	697,674	683,491	+ 14,183	2.1
Wheat, bu	9,550,538	20,868,199	— 11,317,611	54.2
Corn, bu	5,736,627	269,128	+ 5,467,499	2315.6
Other grains	973, 03	203,004	+ 770,199	379 4
Total	19 399,951	24,416.040	— 5,016 089	20.5
Value	$18,816,129	$28.951,320	— $10,135,191	35.0

Though the corn exports were 23 times as great as last year, they were not large. For seven successive years the corn exports in August have been:

Year.	Bushels.	Year.	Bushels.
1877	7,296,170	1881	6,706,801
1878	6,698,069	1882	269,128
1879	3,784,980	1883	5,736,627
1880	8,622 980		

The average of the five years previous to 1882 was 6,756,800. For the whole year the exports have varied from 15,389,000 bushels in 1882 to 117,357,000 in 1880.

For the eight months ending with August the exports have been:

	1883.	1882.	Inc. or Dec.	P. c.
Flour, bbls	5,734,154	4,059,835	+ 674,319	16.6
Wheat, bu	42,645,125	64,216.188	— 21,571,063	33.6
Corn, bu	45,466,907	10,794,379	+ 34,672,528	321.0
Total value	$114,237.045	$110,275,898	+ $3,961,147	3.6

As the exports of wheat this year were mostly from the exceptionally large crop of 1882 and those of last year from the exceptionally small crop of 1881, it is somewhat surprising to see a very large decrease in them. However, more than half of the decrease was in the month of August, when the exports last year were chiefly from the abundant crop of 1882 and this year largely from the poor crop of 1883, and nearly the whole of the decrease was in July and August; and in July as well as August last year the exports were mostly from the new crop, which came forward earlier than this year. But the chief cause of the decrease, doubtless, is the much lighter European demand and the larger supply from other countries than this.

THE CHICAGO-LOUISVILLE PASSENGER WAR is an acute attack of what appears to be a chronic disease affecting the railroads from Chicago to the Ohio River, though the attacks are commoner in the freight than in the passenger business. In the former they usually attract little public attention, however. To serve local purposes chiefly, many railroads have been built, and each of course wants a share of the through business. Now this through business is very small; compared with that between Chicago and the East it is trifling, while there are nearly or quite as many lines to carry it. This, perhaps makes the roads somewhat reckless in competing for traffic. The whole value of it may be destroyed without inflicting any very great loss on any line. None of them, however, have any profits to throw away, and, as usual, a contest among them is sure to affect to some extent their local business, and it may involve, to some extent, other lines, and a much more important traffic than that which they are fighting about. That this particular travel is not of vast importance to any one may be judged by the fact that an agent of one of the lines stated the average number of passengers ticketed daily from Chicago to Louisville to be *ten*, which is probably near the truth. As Indianapolis is involved, and to some extent Cincinnati and some local points, of course this does not measure the amount of loss there is in carrying passengers 300 miles for a dollar.

THE OHIO CENTRAL COMPANY, which defaulted on the interest of its River Division bonds last month, is already in the hands of a receiver, who has been appointed, so far as appears at present, at the instance of the management of the company, and not of the bondholders. The New York daily papers report that there is much indignation among the latter, and talk of "making it hot" for the builders and managers of the road. It does not appear, however, that they have done anything more than to build a road which does not pay, and hardly seemed likely to pay when it was built, and to issue upon it a very large amount of stock and bonds which they have succeeded in selling to the public. They have apparently gone upon the theory that if they issued plenty of paper they could sell enough of it at some

price to get back the money they put in the road, with a profit to themselves, and their theory has worked well as far as they are concerned; but the buyers, who have found out that their so-called cheap securities are not very secure, are naturally indignant. It is not likely that they can do anything, however; for this sort of financial management, while it cannot be defended as strictly honorable, is within the law. The buyer should beware, is the old rule, and the bondholders, not only of this but of some other companies, will probably find out that cheap bonds mean poor security now, as they always have done.

PACIFIC THROUGH FREIGHTS have especial interest just now because of the opening of the new Northern Pacific line. The shipments of through freight eastward over the Central and Southern Pacific roads for August and the eight months ending Aug. 31 were as follows, in tons:

	Central		Southern		Total
	Tons.	P.c. of total.	Tons.	P.c. of total.	Tons
August.....	...12,084	64.4	6,674	35.6	18.758
Eight months...	48,752	57.2	36,498	42.8	85,250

Up to May the Southern Pacific route ran ahead of the Central in tonnage, but since that month the Central shipments have largely increased. The August tonnage was heavier than that of any preceding month of the year.

The total shipments over the Central for the eight months were 4,875 cars, an average of a little over 20 cars daily; over the Southern, 3,650 car-loads, or an average of a little over 15 cars daily. The total shipments thus made up an average of about 35 ten-ton car-loads per day.

The eight leading items of freight for the eight months were 11,529 tons sugar, 9,093 tons canned salmon, 8,789 tons wool, 7,316 tons tea, 7,283 tons ripe fruit, 5,720 tons canned goods other than salmon, 5,261 tons wine and 1,897 tons rice. These eight articles made up 66.7 per cent. of the total shipments.

DIFFERENTIAL FARES have worked somewhat as expected for ordinary travel, though we believe that the roads with the highest rates have gained rather than lost in proportion, while the differences have been applied. But with second-class fare it has been different. The man who wants to travel second-class apparently regards nothing but the price. These tickets do not cost very much less than first-class tickets, when full rates were paid, and the difference between the highest and lowest second-class fare was comparatively a trifle; but half a dollar was enough to turn the passenger from what we may assume to be the best route of a thousand miles to the worst.

The fact probably is that very few travel second-class except those who are quite poor, have a low standard of comfort, and whose time is not worth much. These people will not pay for elegance, because they do not value it, nor for speed, because the time saved is not valuable to them. The result of a year's experience is that at the last meeting of the Passenger Department of the Joint Executive Committee differences in second-class fares were abolished, while in first-class fares they were continued and modified in order to effect what was regarded an equitable division of the travel between competing points.

WHEAT FREIGHTS FROM SAN FRANCISCO have fallen still lower, and a charter for a wooden vessel was made Sept. 26 at 38s. 9d. per ton, equal to a little less than 25 cents per bushel for the 16,000 miles. It is not to be expected that vessels will go to San Francisco for cargoes at so low a rate; but once there they are compelled to accept what they can get. Since the year of the high freights the estimates of the wheat crop in California seem to have been exaggerated systematically in California, for the very purpose of attracting a large tonnage to carry it and secure the low rates which an over-supply of vessels causes. The local estimates have exceeded those of the Department of Agriculture sometimes by as much as 20 million bushels, and the exports of the following year have always shown that the local estimates were vastly too large and the Department estimates not very far wrong. Last spring we were promised a crop of more than 50,000,000 in California. It now seems probable that it is not much more than 30 millions.

BRITISH RAIL EXPORTS TO THE UNITED STATES increased materially in August over the average of nine previous months. They were 9,511 tons, against an average of 5,464 tons for the nine months beginning with November and ending with July. The August exports, however, are nearly a third less than last year and two-thirds less than in 1881. The increase over previous months may possibly be due to the reduction in the duty, though American prices have been so low that it is hard to see how British makers can undersell them unless for delivery at points to which the freight from our mills may be actually higher than the freight from England. This may be the case at some Gulf ports to which vessels going for cargoes of cotton are glad to take cargoes in lieu of ballast at almost any price or for no price; and on the Pacific coast, whither many vessels go for cargoes of wheat, but to which direct exports from Europe are insignificant in bulk. August is the end of the cotton year, and exports of cotton are likely to be smallest then, but exports of wheat from San Francisco may then be at the maximum.

MR. JOHN C. GAULT, late General Manager of the Wabash, and previously Assistant General Manager of the Chicago, Milwaukee & St. Paul, and still earlier of the Chicago & Northwestern, has been appointed Commissioner of the associated lines to California. Mr. Gault has an extraordinary knowledge of traffic, and has long been counted in the Northwest as one of the ablest men in railroad service. His service on different roads with extended and complicated systems must have made him unusually familiar with the complex influences which affect the course of traffic and determine the proportion which different lines between the same places will be able to get. He is therefore the kind of man who should expect to be successful in the position to which he is called, where the duties often require great knowledge, skill, judgment and tact.

THE PROPOSED UNIFORM STANDARD TIME will almost certainly be adopted. A week ago the authorities of 58,000 miles of road, which is nearly one-half of the total now in operation in the United States and Canada, had recorded themselves as in favor of adopting it, and accessions were coming in every day. We shall expect favorable action at the time conventions next month, and the establishment of the standard very soon.

Foreign Railroad Notes.

In Oldenburg there was recently a meeting of people to consider their relations to the railroads. The country is largely devoted to grazing, and the question of fencing was one of the principal subjects discussed. In the course of this discussion the number of cattle killed (about 60 miles of road) for 12 years was given. It was 98 in all, but damages were paid by the railroad in only 11 cases, amounting in the aggregate to $586, or $53 each. The Oldenburgers thought the railroads should be fenced with nothing less passable than a broad ditch, with a fence on the railroad side consisting of one strong board with one or two wires below it. The country is largely below the level of the sea, and these ditches can be kept full of water. The Oldenburgers seem to be much less successful than the American farmers in getting pay for stock killed. An average of less than $50 a year for 50 or 60 miles of road is not much of a revenue for the owners of land in the vicinity. But this is not so surprising as that the railroad pays only for one in nine of the cattle killed.

THE SCRAP HEAP.

Locomotive Building.

During the month of August 57 locomotives were turned out and shipped from the shops in this city, divided as follows: 34 from the Rogers Works, 14 from the Cooke Works and 9 from the Grant Works.—*Paterson (N. J.) Press.*

The Dickson Manufacturing Co. in Scranton, Pa., is building a locomotive for the Chicago, Fairchild & Eau Claire road in Wisconsin.

The Indianapolis & St. Louis shops at Mattoon, Ill., have recently completed a new heavy passenger locomotive for the road.

The Louisville & Nashville shops in Louisville, Ky., are building four new consolidation freight engines with 20 by 24 in. cylinders.

The Rogers Locomotive Works in Paterson, N. J., last week shipped several locomotives to the New York, West Shore & Buffalo road.

The Mason Machine Co. in Taunton, Mass., is building 8 locomotives for the new Columbus & Eastern road.

The Norfolk & Western Co. is said to have let contracts for 9 heavy freight locomotives.

Accounts from the shops seem to indicate that more eight-wheel locomotives and fewer mogul and consolidation engines are ordered for Western roads than was the case a year or two ago.

Car Notes.

Blain Brothers, owners of the Huntingdon Car Works at Huntingdon, Pa., suspended payment Sept. 28, when a judgment of $50,000 was entered against them by the Union Bank. The liabilities are said to be about $200,000 and the assets are estimated at $100,000. An effort will be made to arrange with the creditors to continue work, in order to fill contracts on hand.

In the Louisville & Nashville shops in Louisville, Ky., 10 new 50-ft. passenger cars have just been completed. They are finished in gum wood with raised panels of black walnut. A good deal of the superfluous ornamentation has been omitted, with a view to simplicity and plainness and ease of cleaning. Four passenger cars are being rebuilt, and 12 coal derrick cars are under way. These latter are to be used for coaling engines, the system involving the storing of the coal on the ground or in bins, and a traveling car fitted with a crane for loading the tenders therefrom. Work will soon begin on 50 new stock cars.—*National Car-Builder.*

The Litchfield Car Co. in Litchfield, Ill., has just completed a combined baggage, mail and express car for the St. Louis, Alton & Terre Haute road.

The LaFayette Car Works in LaFayette, Ind., are building 1,000 box cars for the New York, Chicago & St. Louis road.

The Janney automatic car coupler is being put on 100 freight cars on the Chicago, Burlington & Quincy road.

The Gill Car Manufacturing Co. in Columbus, O., is building 100 box cars for the Cleveland & Marietta road.

The Buffalo Car Co. in Buffalo, N. Y., is building 200 coal cars for the Rochester & Pittsburgh road.

The Union Switch & Signal Co. in Pittsburgh has received an order for its patent heating apparatus for 40 Pullman cars.

The Atlanta & West Point shops in Atlanta, Ga., are building 40 new coal cars for the road.

The Indianapolis Car Works in Indianapolis, Ind., are building 400 box cars for the New York, Lake Erie & Western road.

The contracts let for the Norfolk & Western road include 1 baggage and 6 passenger cars, 100 box and 600 coal cars.

The Wagner-Seath patent outside door is being put on a number of box cars for the New York, Lake Erie & Western road.

Bridge Notes.

Rust & Coolidge in Chicago have taken a contract for the bridge over the Menominee River in Wisconsin on the Marinette Branch of the Milwaukee & Northern road.

Clark, Reeves & Co. in Phœnixville, Pa., have taken the contract to build a new iron bridge over the Schuylkill River near Reading, Pa., for the Wilmington & Northern road. It will take the place of the old wooden bridge now in use, and will cost about $45,000 in all.

The Kansas City Bridge & Iron Co. in Kansas City, Mo., is building four spans for the Kansas City, Springfield & Memphis and one for the Clifton & Southern Pacific road.

Iron Notes.

The Leighton Steel Co. at Chattanooga, Tenn., has sold its works to Mr. H. G. Young, who will put them in operation at once.

Henry Clay furnace at Reading, Pa., has one stack in blast, and the second will be blown in shortly.

The rolling mill at Blandon, Pa., has been started up after a short stoppage.

Mr. W. S. Armitage, of Detroit, Secretary of the Eureka Iron Co., Wyandotte, Mich., announces that the property of the company, including two blast furnaces and mills for the manufacture of boiler plate, tank, sheet and bar iron, knobbling and puddling furnaces, as well as the foundry cupolas, boiler, machine, blacksmith, and pattern shops, testing machines, weigh-scales, docks, railroad tracks, locomotives, charcoal kilns, etc., will be sold at Wyandotte on Oct. 10, as the charter of the company expires by limitation on the 24th of that month.—*American Manufacturer.*

The Solid Steel Casting Co., at Alliance, O., now has its works in full operation.

The James River Iron Works, on the Richmond & Allegheny road near Lynchburg, Vt., have been sold to Col. A. H. Leftwitch, who will build a large nail mill there in addition to the present works.

Manufacturing Notes.

The Wallis Iron Works, of Jersey City, are employing over 100 men on contracts which will keep them busy for the next three months. They are building a foundry, boiler shop and main erecting shop for the New York, West Shore & Buffalo road at Frankfort, N. Y. At Buffalo they are building a planing mill, blacksmith shop and machine shop for the same road. They have also contracted for roofs for the Forty-seventh Regiment armory and the Dime Savings Bank buildings in Brooklyn.

The French Spiral Spring Co. and A. French & Co., of Pittsburgh, have appointed Mr. Jos. M. Rogan as their representative in the Northwest, with headquarters at the office, No. 246 Clark street, Grand Pacific Hotel Building, Chicago, where a variety of their springs are kept on exhibition.

Mr. Oswald McAllister has succeeded his father, Mr. W. Y. McAllister, in business as importer and manufacturer of mathematical instruments and drawing materials, and will hereafter conduct that department of the long-established business at No. 716 Walnut street, Philadelphia.

The Machine Tool Works of Philadelphia, Frederick B. Miles, engineer, have received at the Cincinnati Exposition a gold medal for the best display of machine tools and six silver medals for individual tools shown. The exhibit included axle lathes, car-wheel borers, lathes, planers, steam hammers and other tools.

The Rail Market.

Steel Rails.—The business reported is chiefly sales of small lots, for which prices are steady at $37 to $38 per ton at mill. No large contracts are reported, although there are many inquiries, especially for light rails. The business for spring delivery has hardly begun yet.

Rail Fastenings.—Spikes are unchanged at $2.60 per 100 lbs. in Pittsburgh, where also track-bolts are quoted at $3 per 100 lbs, for square nuts, and $3.20 to $3.25 for hexagon. Splice-bars are steady at 1.9 to 2 cents per pound.

Old Rails.—The demand for old iron rails is more active and there is much negotiation, though few actual sales are reported. Quotations are $23 to $23.50 per ton in Philadelphia for tees and $25 to $26 for double-heads. Pittsburgh quotations are $24 to $24.50 per ton for American tees.

British Rail Exports.

For the month of August and the eight months then ending the exports of iron and steel rails from Great Britain to the United States and to all countries are represented as follows by the Board of Trade, in tons of 2,240 lbs.:

To United States:	August			Eight months		
	1881.	1882.	1883.	1881.	1882.	1883.
Iron rails....	5,763	200	120	77,576	20,813	2,519
Steel rails....	23,820	12,979	9,391	136,662	132,413	44,794
Total....	29,583	13,179	9,511	214,238	153,226	47,313
To all Countries:						
Iron rails.....	9,801	1,946	1,532	92,740	37,959	20,102
Steel rails.....	57,806	73,320	60,155	390,293	505,017	516,179
Total.....	67,607	75,266	61,687	483,033	542,976	536,281

The August exports to this country, though nearly a third less than last year and two-thirds less than in 1881, were nevertheless the largest there have been for ten months, and nearly three times the average of previous months of this year. As prices here were lower rather than higher than in previous months, and the duty plus the lowest English price has been at least as much as the American price, without counting freights, this may seem strange. But there are some places in this country where the freights may be less from England than from American works, as on the Pacific Coast, where vessels going for wheat might be glad to take rails for next to nothing, or at Gulf ports, where vessels go for cotton and can get almost nothing for freight in this direction.

The exports to countries other than the United States were exceptionally small in August. Heretofore they have been so large as to make the total British exports larger this year than last. But in August the exports to countries other than the United States were but 52,176 tons, against 62,087 last year and 38,024 in 1881. The exports to Mexico have fallen off largely, and the unspecified other countries (including Mexico), which have latterly taken much more than any one country named, fell far below Australia and still further below Canada in August, and very little above the United States.

Iron rails, we see, are fast going out of use. They formed 50 per cent. of the total British rail exports in 1880, 19 in 1881, 7 in 1882, and less than 4 per cent. this year. Evidently the iron rail must go, and indeed has nearly gone.

A Defaulter.

We have received the following circular from Mr. C. Hamilton, General Superintendent of the St. Louis & Cairo road: "C. W. Johnson, for the past two years Chief Clerk in the Passenger Department of this road, has turned out to be a defaulter, to use a mild expression, having taken several hundred dollars worth of tickets out of stock, stamped them with the General Passenger Agent's stamp, sold them to scalpers and absconded with the proceeds; he is also guilty of other irregularities. He will undoubtedly seek employment among railroads in the near future, and I would feel under obligations to you if you were to let me know if he applies to you for a position, or if his whereabouts are known to any of your employés.

"He is about 5 feet 6 in. high, slim build, weighs about 130 pounds, has a swinging gait and active motion, prominent nose, light brown hair, close cut, light thin mustache, blue or gray eyes, light complexion, age 27.

"He is well known among passenger men, having been engaged in the passenger departments of other roads before his connection with this Company.

"Please put this circular where it will do the most good, as a liberal reward will be paid for his apprehension."

Accommodation.

Hell-Hole Swamp is the name of a place in South Carolina, and every time a stranger stops at a railway restaurant in that State he thinks he's in that place.—*Boston Post.*

There is said to be a "new trouble with hogs" in the

West. The old trouble still exists here of making them occupy but one seat in a railway car.—*Commercial Bulletin.*

A man in New York manufactures a very fair sort of railroad egg out of corn starch, albumen and plaster of Paris. It has only one object—it cannot be beaten.—*Lowell Courier.*

"Fwhat kind of a railroad d'ye call this, anny way?" said an indignant Irishman on an accommodation train. "It'll be shtoppin' half an hour every five minutes, bad luck to it!"—*Pathfinder.*

Stenciled Head-Linings.

In overhauling head-linings, the Assistant Master Mechanic of the Louisville & Nashville, Mr. P. Leeds, makes use of a stenciling process by which rapid and effective work is done. The shape of the ornamental design is cut out in a piece of tin, and similar openings for the shaded portions are also cut in the same piece, by which means the general outlines and the heavy shades are laid on mechanically. The blending of the shades is then done by hand on the removal of the stencil. As an illustration of the economy and effectiveness of this method, a head-lining is exhibited which in appearanne is in all respects equal to the high-priced Eastern ones, but the painting of which cost only $12.—*National Car-Builder.*

Grade Crossings in Connecticut.

The Railroad Commissioners of Connecticut have addressed a circular to the officials of every town in the state, in which they request to be informed of any grade crossings which the public safety may require to be changed.

Big Wages for Engineers.

The Aurora (Ill.) *Beacon* says: "The largest amount of money ever drawn by any engineer of this division (of the Chicago, Burlington & Quincy) for one month's wages, was drawn this month by Sam Knight, who put in 54 days, and drew $192 50. The engineer of No. 375 of the Aurora Division got in 57 days and drew $199.50."

Sticks for Coupling Cars.

The Chicago, Burlington & Quincy Co. is furnishing its brakemen with sticks to be used in coupling cars, in order that they may avoid the risk of getting their hands crushed. The Galesburg (Ill.) *Plaindealer* says: "Mr. Kennedy, foreman of the wood shop, has received orders to make 300 red sticks, each a foot long, ½ in. thick and 1½ in. wide, to be used by brakemen in making couplings. That is what they are designed for, but if we remember rightly, a similar plan was tried a few years ago, and the men soon threw the sticks away, claiming that it was more dangerous to carry them than to handle the links with their hands. We were told in 1876 by a brakeman that he carried his stick the longest of any of the boys, keeping it in his boot leg, but one night when he was running over the top of the cars, the handle caught in a brake wheel and threw him clear onto the centre of the other car. He then threw the stick away, fearing that the next time he would not be so fortunate in finding a stopping place."

A Railroad Company Sued for Slander.

Quincy *Whig* says: "Wm. K. Hollis has instituted suit in the United States Court at St. Louis for $50,000 damages against the C., B. & Q. Railroad Company. The basis of the action was a notice which Henry B. Stone, General Superintendent of the company, caused to be published on the 9th of November last to the effect that Hollis had been discharged from his employment as foreman of the round house at East St. Louis 'for dishonesty in selling a car of the company's coal and appropriating the proceeds, and in drawing another man's pay and appropriating it.'"

A Narrow Escape.

What might have been another in the list of horrible railroad catastrophes which have recently shocked the country was yesterday averted by the coolness and presence of mind of an engineer on the Baltimore & Ohio Railroad. Yesterday morning at the dawn of day when the express, which is due in Chicago at 5:40 a. m., was about 30 odd miles from the city, and running at great speed, the engineer noticed smoke in front of him and feeling a presentiment of danger instantly applied the air-brakes and stopped the train, loaded with its sleeping freight, just in time to keep it from plunging into the Little Calumet River. The bridge was burnt, and not over thirty feet separated the locomotive of the train from the yawning abyss. The alarm was given, and assistance was summoned by telegraph. In a short time a train reached the spot and the passengers were transferred. The train arrived in this city about noon, the passengers well satisfied to have made such a narrow escape.—*Chicago Tribune, Sept.* 30.

A Successful Train Robbery.

A dispatch from Indianapolis, Sept. 28, says: "Bert Loomis, the Wabash express messenger and baggage master on the Detroit express, which arrived in this city at 2:15 this morning, was overpowered by robbers about midnight between Roann and Peru, on the main line, and a large sum of money, supposed to be about $1,500, was taken from the car. The robbery was unknown to any of the trainmen until Peru was reached. Loomis was the only one in the baggage car, and not appearing at Peru, where the train stopped, investigation discovered him lying insensible on the floor of the car, bucked and gagged, and badly bruised and bleeding. His legs and feet had been tightly bound with quarter-inch cords, his hands twisted and tied immovably behind him, and his mouth filled with handkerchiefs, heavily knotted. Conductor C. E. Wells and his brakeman immediately relieved the messenger and instituted search for the robbers, who apparently had had things their own way and had successfully escaped with the money packages.

"Wells' theory of the robbery is that the masked men boarded the train in the woods about the Chicago & Atlantic crossing, where the last stop was made this side of Laketon. They passed at once into the express and baggage car, the door to which by some mischance had not been locked. Two suspicious characters have been arrested at Logansport, supposed to be implicated in the robbery."

Attempt at Train Robbery.

A dispatch from Kansas City, Mo., Sept. 29, says: "An attempt was made to rob the 'Thunderbolt' Santa Fe express train at Coolidge, Kan., a small station on the Kansas and Colorado line, 450 miles west of here, last night, news of which caused excitement here such as has not been known since the Glendale, Winston and Blue Cut train robberies.

"Reports received this morning were very conflicting. It was first stated two men were killed and a large amount of booty secured. Later dispatches, giving fuller particulars, stated that the engineer was killed and the fireman wounded, but no money secured by the robbers.

"The train was the regular east-bound passenger train, which left Denver last night and was due here to-night. Coolidge is a small cattle station, and aside from a telegraph operator is almost uninhabited. As the train pulled out from Coolidge three men appeared and ordered the engineer to stop. He refused and was shot dead. The fireman was also shot through the breast and badly hurt though not fatally.

"The men assailed the express car, but Samuel Patterson, the express messenger, was prepared for them and made such a vigorous fight that the robbers were driven off. Finding the train aroused and themselves likely to be worsted the robbers then beat a retreat, having failed to secure the treasure which they were after.

Information was at once telegraphed to stations along the line and a special train started for Coolidge from Emporia with a party of armed men in pursuit. The dead engineer, whose name was John Hilton, lived at Emporia, his run being between that point and Dodge City."

Locomotives for Sale.

The Lake Shore & Michigan Southern Co. offers for sale 15 locomotives at very moderate prices. The list includes one 15 by 20 in. cylinders, 5 ft. drivers; one 15 by 20 in. cylinders, 4 ft. 10 in. drivers; one 15 by 22 in. cylinders, 4 ft. 10 in. drivers; one 15 by 22 in. cylinders, 5 ft. drivers; one 14 by 20 in. cylinders, 4 ft. drivers; one 16 by 22 in. cylinders, 4ft. 10 in. drivers; light 16 by 22 in. cylinders, 5 ft. drivers, and one 16½ by 22 in. cylinders, 5 ft. drivers. They are from various makers and in good working order. Application should be made to Purchasing Agent A. C. Armstrong, at Cleveland, Ohio.

Complexity of Gauges in Australia.

A correspondent of the Indian *Railway Service Gazette* says:

"I cannot say how the ill-advised scheme of two lines on two different gauges joining the two colonies will answer, but undoubtedly the Victorian Parliament is responsible for this blunder. It is predicted that it will prove unworkable. The great mistake these colonies have made is adopting a diversity of gauges. In Queensland the metre gauge exists, in New South Wales the English standard, 4 ft. 8½ in., has been adopted; Victoria has utilized the 5 ft. 3 in. broad gauge; while South Australia has introduced a dual gauge 5 ft. 3 in. broad, and a metre gauge 3 ft. 3 in. By a stroke of luck the broad gauge will suit the Victorian railways, and as the metre gauge is being constructed in the far north it will eventually join some of the metre lines in the tropical portion of Queensland. New South Wales has selected the old English standard gauge, and as it is geographically central between the three colonies of Victoria, Queensland and South Australia, its gauge will not work with either of the gauges adopted by its neighbors. The connection between Melbourne and Sydney has practically demonstrated this drawback and as these colonies extend their iron roads, this break of gauge difficulty will be further manifested."

Electrical Appliances on Austrian Railroads.

Treating of railways naturally brings me to a number of important apparatus used by the Imperial Austrian State railways and invented by the Chief Inspector of Railroads, Herr Pollitzer. They are: (1) A central point-blocking apparatus. The object of this apparatus is to control any pointsman from a central office and to prevent him from showing the line clear until ordered to do so by the central office. It consists of a small box and a manipulator. The box has an electric bell at the top and two circular openings in front, exhibiting, in their turn, the two different directions of a train. On the train being announced from the nearest station, the person in charge at the office presses a stud beneath the opening indicating the direction of the train. The pointsman answers the signal. The points are now set by the manipulator from the central office and simultaneously the lever for the semaphore signal is electrically released, enabling the pointsman to show the line clear. (2.) Intermediary blocking apparatus and speed measurer. The apparatus consists of a clock case containing a clockwork and sector of a dial and two glass covered circular openings above the clock. The train—generally the last carriage—has a small brush attached to a lever which presses the brush against a brass contact piece placed on the line, close to the rail, at the beginning of one section. When contact is made, a red disk appears in one of the openings, and the clock begins to move. At the end of the section a similar contact-piece causes another red disk to appear on its respective apparatus, stops the clock movement, and removes the disk of the preceding one. The distance through which the clock-hand has moved over the sector indicates the speed of the train. As long as the red disk is exhibited no train can move in either direction.

(3). Central disk for signaling. On a disk are inscribed different numbers of signals for passenger and goods trains, and a switch-board above the disk exhibits these different numbers on the fall of an annunciator, which is caused by the setting of a contact arm, movable over the disk, on the respective number of the train. All the trains moving on the line are controlled by electric semaphores, which show the line clear only on the appearance of the number of signals characteristic of a special train. As soon as the train has left the section the official at the station turns the contact arm to the place indicated on the disk for that train; the annunciator of the corresponding numbers on the switch-board falls, and all the semaphores of the section show the line clear. (4). Apparatus for closing railway gates for foot passengers. The object of the apparatus is the automatic lowering or raising of a gate closing the footpath across a railway line by a mechanism worked electrically. An electric bell, worked by a signalman at some distance from the gate, informs the foot passengers of the approach of the train; and, by the same operation, the gate is closed electrically by the release of a clock train, which moves a jointed lever arm through an angle of 90 degrees; when the train has passed, the same manipulation opens the gate by completing the movement of the lever arm. (5). Station indicator. It is no small boon for passengers traveling by express train over long distances to know the name of the nearest station at which the train stops sufficiently long to take a meal, buy a paper, etc. Herr Pollitzer places in every carriage a small box exhibiting in the corner the name of the next station, with time allowed for stoppage. The guard has simply to press the stud of a similar box placed in his van some time before the station is reached, and every box shows the name of the next station, with the time allowed for stoppage. The battery for railway intercommunication, which is rarely used, can be employed for this purpose.—*Vienna Correspondence London Times.*

The Condition of the Iron Trade.

We do not for one moment assent to the theory that the condition of our iron and steel industries is to-day worse than it was a few weeks ago, and that the outlook for the immediate future is discouraging. On the contrary, we know that consumption of all leading iron and steel products is more active than it has recently been. The steel-rail mills are generally very busy; so are the plate and sheet mills. The nail manufacturers both East and West have a very favorable outlook because stocks are low, and the structural and bridge iron manufacturers are as busy as they can be. In iron bridge-building there has been at no time during the whole year the slightest approach to dullness. In iron and steel shipbuilding on the Delaware there is the greatest activity, as was shown by detailed statistics published in our columns recently. The use of iron this year in the construction of all kinds of public and private buildings is well known to have been very large, and probably without precedent. The stove trade is now active, and so is the manufacture of machinery and locomotives, and even railroad cars are being turned out in large numbers, although, of course, owing to the decline in railroad building, not in as large numbers as a year or two ago. The Pennsylvania Railroad Company has just ordered 500 freight cars to be built for early delivery. In pig iron we are producing at about the same rate as last year, which is not a bad showing by any means. Stocks of pig iron are nowhere accumulating. As to prices we need not say that they are low, but take them all in all they are no lower than they were a few weeks ago, and instead of tending downward they manifest a strong tendency to steadiness and firmness. Why should they further decline? Production in all lines has been reduced to correspond with the demand, and if we have no over-production there is absolutely nothing to cause a further shrinkage in prices. They are as low as they ought to be. The country is prosperous, and it can well afford to buy iron and steel at prevailing prices. It will not be deterred from buying them because prices ar not lower. We rather look for it to keep on buying *because they are as low as they are.* Our friends have much encouragement to keep up their courage and their prices. We feel sure that the situation will get better before it gets worse.—*Bulletin of American Iron and Steel Association.*

Some Railroad Reminiscences.

On the old brick building now being torn away, at the corner of Delaware street and Virginia avenue, has been the sign for 20 years or more, "Indiana Central Railway." The building has for years been used for coal and lime, flour and feed, and other commercial purposes. It was built in 1857 by Andrew Wallace, and its history involves that of many of the well-known citizens of Indianapolis. Gen. R. S. Foster walked out the Indianapolis, Peru & Chicago road for many miles, selecting the oak-joists and beams that were to be used in the building. Strange to say, the oak timber along this line is not yet exhausted. Many of the timbers were taken out of the building in a fair state of preservation. The walls were erected in the winter time and the mortar froze dry and the building has been on such low wet ground that it is a little strange that any of the material used in its construction lasted so well. Mr. Wallace used the lower floor for commercial purposes and General Foster (who was working for Mr. Wallace) recalls the fact that Delaware street was so low in 1857-60 that barrels of flour were rolled evenly from a dray upon the sidewalk. Since then the floor of the building has been raised a foot, and yet Delaware street is now 9 in. higher than the floor, showing a fill of 4 ft. in the streets in that vicinity. In 1858-9 the Indiana Central Railroad offices were established in the upper story of the building, and the limited space was found ample for the transaction of all the office's business. John S. Newman was President; Samuel Hanna, Treasurer; Horace Parrott, General Ticket Agent; George Adams, General Freight Agent; "Yankee" Smith, Superintendent; and W. A. Bradshaw, Local Freight Agent. Not one of these men is in the railroad business now, and the business of the road they managed has grown so that their office room combined would hardly suffice for the car accountant's affairs. The Panhandle has in sight buildings valued at many thousand dollars, and the space occupied by the old building is to be cleared off for the accommodation of the local traffic.—*Indianapolis News.*

Brighton Electric Railway.

The Brighton (England) Electric Railway is so far successful that it is proposed to extend it for two miles along the whole front of the Esplanade wall. The car carries 12 persons, but on occasions 16, and runs at a mean speed of 7 miles an hour, the gradient being 1 in 100. The average daily journey is 25 to 30 miles, and the average number of passengers daily, 350; but on a recent holiday the car ran for 11 hours without intermission, except to discharge and take a fresh load of passengers. The motor has a pulley of 5 in., and runs at the rate of 700 revolution per minute. This pulley, by means of a belt, drives a 10-in. pulley on a countershaft, and that again drives a 12-in. pulley on the axle. The track is about a quarter of a mile long, and in one direction the car runs at the rate of 5 miles, but returns at the rate of 10 miles an hour. Ordinary flange rails with longitudinal sleepers laid on the shingle form the line, and the rails alone are used as conductors, the loss of current being only 5 per cent. in dry, and 10 per cent. in wet weather. The cost is said to be only a little over one cent per mile per passenger, *i. e.*, the cost of carrying 12 passengers 60 journeys of half a mile is $3.76, which includes 15 per cent. depreciation on cost; but the railway is capable of doubling its traffic without increasing its expenditure, except for gas.

Performance of a Goodwin Dump Car.

The following is a record of the performance of a four-wheeled dump car of J. M. Goodwin's patent during a week in September:

	Miles.	Ton-miles.
10 tons mill cinder, Cleveland to Gore, O.....	197	1,970
Empty, Gore to New Straitsville.....	4	.....
8½ tons coal New Straitsville to Columbus....	63	535
Empty, Columbus to New Straitsville.....	63	.....
8½ tons coal New Straitsville to Toledo.....	187	1,590
Total	514	4,095

The cost of unloading the three cargoes was nothing. Besides lying still Sunday the car was held at Columbus 24 hours for exhibition.

The average performance of a freight car according to the census statistics is 1,445 ton-miles per week.

General Railroad News

MEETINGS AND ANNOUNCEMENTS.

Meetings.

Meetings will be held as follows:

Cincinnati, Sandusky & Cleveland, annual meeting, at the office in Sandusky, O., Oct. 17.

New York, Lake Erie & Western, annual meeting, at the office in New York, Nov. 27. The register for bondholders entitled to vote will be open from Sept. 28 to Oct. 27.

Dividends.

Dividends have been declared as follows:

Atchison, Topeka & Sante Fe, 1½ per cent., quarterly, payable Nov. 16. Transfer books close Oct. 11.

Delaware, Lackawanna & Western, 2 per cent., quarterly, payable Oct. 20. Transfer books close Oct. 4.

Housatonic, 2 per cent, quarterly, on the preferred stock, payable Oct. 15. Transfer books close Oct. 5.

Long Island, 1 per cent., quarterly, payable Nov. 1, at the office of the Corbin Banking Co. in New York. Transfer books close Oct. 15.

Nashua & Rochester (leased to Worcester & Nashua), 1½ per cent., semi-annual, payable Oct. 1.

Pittsburgh, Fort Wayne & Chicago (leased to Pennsylvania Company), 1¾ per cent., quarterly, payable Oct. 1 on special stock and Oct. 2 on regular stock.

Vermont & Massachusetts (leased to Fitchburg Co.), 3 per cent., semi-annual, payable Oct. 8.

Sioux City & Pacific, 3½ per cent., semi-annual, on the preferred stock, payable Oct. 5.

Railroad and Technical Conventions.

The *American Street Railway Association* will hold its next meeting in Chicago, Oct. 9.

The *American Institute of Mining Engineers* will hold its autumn meeting in Troy, N. Y., beginning on Tuesday, Oct. 9.

The New England Railroad Club will hold its regular monthly meeting at its rooms in the Boston & Albany passenger station in Boston, Oct. 10, at 7:30 p. m. All interested in railroad matters are invited to attend. The special subject for discussion will be: "The Best Methods for Heating and Ventilating Passenger Cars."

The *General Time Convention* will hold its fall meeting at the Grand Pacific Hotel in Chicago, Oct. 11.

The Southern Railway & Steamship Association will hold its ninth annual convention in Atlanta, Ga., Oct. 17.

The *Southern Time Convention* will hold its fall meeting at No. 46 Bond street, New York, Oct. 17.

The *American Association of Railroad Superintendents* will hold its fall meeting in Washington, Oct. 23.

The *American Society of Mechanical Engineers* will hold its annual meeting in New York, in the week ending Nov. 3.

Foreclosure Sales.

The *Tennessee & Sequatchie Valley* road was sold in Chattanooga, Tenn., Sept. 24, under a judgment of $50,000 granted by the United States Court, and was bought for $20,000 by E. D. Albro, who held the judgment. The sale was made subject to a prior lien for $100,000 held by Thomas McDougal, of Cincinnati. Mr. Albro says that a new company will be organized and will extend the road to Sparta, where connection will be made with a branch of the Nashville, Chattanooga & St. Louis road. It is now completed from Spring City, Tenn., on the Cincinnati Southern road, to Jewett, 12 miles.

New York Railroad Commission.

A dispatch from Albany, N. Y., October 4, says: "At a meeting of the Board of Railroad Commissioners to-day, Commissioner O'Donnell offered a preamble reciting the decision of the Board on August 8 last, which recommended that the New York Central & Hudson River & New York, Lake Erie & Western railroad companies abolish the charge of one cent per bushel for elevating grain into vessels in the port of New York, and a resolution that, in view of the fact that the roads named have not complied with the decision, the papers in the case be transmitted to the Attorney-General under Section 3 of the act creating the Board of Railroad Commissioners, which section provides for proceedings to be taken by that officer. The resolution was laid over until next Monday in order to give the companies notice."

American Institute of Mining Engineers.

The following programme of the Troy meeting has been issued by the Secretary, Prof. T. M. Drown, Easton, Pa., and the local committee of arrangements, of which Prof. R. W. Hunt is Chairman and Mr. Henry Burden Secretary.

Tuesday, Oct. 9.—Opening session, in Keenan Hall at 8 o'clock p. m. Reception to members and associates by the Troy Club at 10 o'clock p. m. Evening dress not expected.

Wednesday, Oct. 10.—Excursion by carriages at 9 a. m., to the Fuller & Warren Co.'s Clinton stove foundry; then to the Rensselaer merchant and rail mills of the Albany & Rensselaer Iron & Steel Co., and finally to the works of the Burden Iron Co. Mr. James A. Burden will kindly entertain the visiting members and ladies at his residence, Woodside, at 1:30 p. m. In the afternoon a visit will be made to the Albany Iron Works and the Bessemer works department of the Albany and Rensselaer Iron & Steel Co. In the evening there will be a session at 7:30, in Keenan Hall, for the reading and discussion of papers.

Thursday, Oct. 11.—At 9 a. m. a visit will be made to some of the shirt and collar shops and laundries of Troy. Sessions for the reading and discussion of papers will be held in Keenan Hall at 10:30 a. m. and 3 p. m. In the evening there will be a subscription dinner at the Troy House, at which ladies, as usual, are expected.

Friday, Oct. 12.—A special train will be provided to take the members to the Hudson River ore property, at Burden station, as guests of the Hudson River Ore Co. After inspection of the mines and roasting kilns lunch will be provided by the company, and the party will then return to Hudson, where those going south can take the regular afternoon train, those going north remaining on the special train for Albany and Troy.

Hotel accommodations will be found at the Troy House ($3 per day); American House ($2.50 per day); and the Mansion House ($2 per day). The Troy House will be the headquarters of the Institute during the meeting, but it is not expected that all the members, and the ladies accompanying them, can be accommodated there. No reduced railroad rates have been obtained for the meeting.

It is desired that members should notify the Secretary of the Local Committee of their intention to be present at the meeting, and state whether ladies will accompany them. Members are advised to secure rooms by writing directly to the hotels.

The following is the list of the papers announced to be read at this meeting:

"The Law of the Apex." By Dr. R. W. Raymond, of New York.

"Some Notes and Tests of an Open-Hearth Steel Charge made for Boiler Plate." By A. E. Hunt, of Pittsburgh.

"The Ste. Genevieve Copper Smelting Process." By Frank Nicholson, of Ste. Genevieve, Mo.

"A Description of a Chemical Laboratory erected in 1863, as an adjunct to the Experimental Steel Works at Wyandotte, Mich." By W. F. Durfee, of Bridgeport, Conn.

"Some Canadian Iron Ores." By F. P. Dewey, of Washington.

"Notes on an Experimental Working of Silver Ores by the Leaching Process." By J. H. Cleaves, of Sonora, Mexico.

"Determination of Manganese in Spiegel." By G. C. Stone, of Newark, N. J.

"Pyrites of Louisa County, Va." By W. H. Adams, of New York.

"A Systematic Nomenclature for Minerals." By H. M. Howe, of Boston.

"The Bessemer Plant of the North Chicago Rolling Mill Co. at South Chicago." By R. Forsyth, of Chicago.

ELECTIONS AND APPOINTMENTS.

Atchison, Topeka & Santa Fe.—The following circular has been issued by Mr. A. E. Touzalin, Vice-President of this company:

"Mr. C. C. Wheeler has resigned the office of general manager, to take effect Oct. 1. The duties of that office will until further notice be performed by the Vice-President. Heads of departments will report, as heretofore, to the General Manager at Topeka. In conducting the business of the road the General Superintendent will be next in command to the General Manager. The superintendents of the four divisions of the road will have full charge on their respective divisions of all employés and matters connected with station service, train, tracks, buildings, bridges, water services and fuel. Division superintendents will report direct to the General Superintendent. The General Manager's office will be in charge of the General Manager's Assistant. Mr. A. A. Robinson is appointed General Superintendent, and will continue to perform the duties of Chief Engineer. Mr. George B. Harris is appointed General Manager's Assistant."

Catasauqua & Fogelsville.—Mr. George T. Barnes, of Philadelphia, has succeeded Mr. Joshua Hunt as President of this company.

Central Iowa.—Mr. C. E. Dudley has been appointed General Superintendent in place of D. N. Pickering, whose resignation on account of advanced age was recently noted. Mr. D. P. Phelps has been appointed Assistant General Superintendent. Mr. Dudley was recently Superintendent of the St. Louis, Iron Mountain & Southern road.

Chesapeake, Ohio & Southwestern.—Mr. Charles Daniels has been appointed Superintendent of Motive Power and Machinery in place of G. A. Haggerty, resigned.

Chicago & Alton.—Mr. S. H. Fulton has been appointed General Eastern Freight Agent, with office in New York, in place of L. Fowler, resigned. Mr. Fulton was formerly with the Great Western Dispatch Line.

Chicago & Eastern Illinois.—At the annual meeting in Chicago, Oct. 2, five directors were chosen, three to fill the places of those whose term then expired, and two to fill vacancies made by death and resignation. The directors chosen were: D. J. Mackey, Chicago; G. H. Ball, Worcester, Mass.; F. H. Story, E. H. Stephens, Boston; J. E. Knapp, New York.

Chicago, Fairchild & Eau Claire River.—Mr. N. C. Foster is General Manager of this new road, and has his office at Fairchild, Eau Claire County, Wisconsin.

Chicago & Northwestern.—The following appointments and changes are announced on this road: Charles B. Gorham, Assistant General Superintendent in charge of the lines in Illinois, Wisconsin and Michigan; W. B. Linsley, Assistant General Superintendent in charge of the lines in Iowa; S. Sanborn, Assistant General Superintendent in charge of the lines in Minnesota and Dakota.

Mr. W. F. Fitch is appointed Superintendent of the Peninsula Division in place of Mr. Linsley, promoted. Mr. J. S. Oliver succeeds Mr. Fitch as Superintendent of the Dakota Division.

Chicago-Ohio River Pool.—The companies composing this pool as reorganized have chosen V. T. Malott, President of the Executive Committee, and S. D. Richardson, Pool Commissioner. Mr. Malott, was formerly General Manager of the Indianapolis, Penn. & Chicago road, and is now a banker in Indianapolis.

Chicago & Western.—At the annual meeting in Chicago last week the following directors were chosen: Alexander B. Coxe, Eckley B. Coxe, Henry B. Coxe, E. B. Ely, Geo. Merryweather. The board elected Henry B. Coxe President; George Merryweather, Vice-President; Robert F. Stevens, Secretary.

Columbus & Eastern.—The officers of this road are as follows: President, J. E. Redfield; Solicitor, W. E. Guerin; Contractor, C. H. Roser; Chief Engineer, F. J. Aid; Auditor and Paymaster, C. A. Corret. Office at Columbus, Ohio.

Cornwall & Lebanon.—Mr. Robert H. Coleman is President of this company, and Mr. John C. Jennings is Superintendent of the road.

Florida Central & Western.—At the annual meeting in Jacksonville, Fla., last week, the following directors were elected: B. S. Henning, C. D. Willard, L. M. Lawson, T. C. Platt, E. N. Dickerson, E. H. Harriman, J. D. Campbell, New York; C. R. Cummings, F. W. Peck, Chicago; Elijah Smith, Boston; Wayne McVeagh, Philadelphia; A. D. Basnett, J. M. Schumacher, Jacksonville.

Kentucky Central.—Mr. C. H. Barr, Jr., has been appointed Car Accountant in place of Leon Yelton, resigned.

Kingston, Warwick & Easton.—The officers of this new company are: President, Grinnell Burt; Vice-President, Theodore Houston; Secretary and Treasurer, F. E. Worcester.

Little Rock & Fort Smith.—Mr. Henry Wood has been appointed General Manager. He also holds the same office on the Little Rock, Mississippi River & Texas road.

Little Rock, Mississippi River & Texas.—Mr. Henry Wood has been appointed General Manager. He is also General Manager of the Little Rock & Fort Smith road.

Louisville & Nashville.—At the annual meeting in Louisville, Ky., Oct. 3, the following directors were chosen: F. D. Carley, John E. Green, W. C. Hall, Louisville, Ky.; George A. Washington, Nashville, Tenn.; C. C. Baldwin, Edward H. Green, Jay Gould, Thomas F. Ryan, J. S. Rogers, Russell Sage, W. F. Whitehouse, W. S. Williams, James T. Woodward, New York. Messrs. Gould, Ryan and Sage are new directors, replacing Thomas W. Evans, G. C. Clark, and John M. Brookman. It has been understood for some time that Messrs. Gould and Sage would enter the board.

The board subsequently re-elected the old officers, as follows: President, C. C. Baldwin; First Vice-President, Milton H. Smith; Second Vice-President, G. A. Washington; Third Vice-President, F. D. Carley; Secretary, W. Ranney; Assistant Secretary, A. M. Quarrier.

Minneapolis & St. Louis.—At the annual meeting in Minneapolis, Minn., Oct. 2, the following directors were chosen: W. H. Truesdale, W. D. Washburn, Minneapolis, Minn.; J. D. Springer, St. Paul, Minn.; R. R. Cable, M. Winthrop, H. H. Porter, A. Kimball, Chicago; David Dows, H. R. Bishop, New York. The new directors are Messrs. Springer, Truesdale, Kimball and Winthrop, who succeed Benjamin Brewster, W. W. McNair, W. P. Merrian and A. B. Stickney. The changes do not involve any alteration in the control of the road. The board re-elected R. R. Cable President; W. H. Truesdale, Vice-President; J. Gaskell, Secretary and Treasurer.

Natchez, Jackson & Columbus.—Mr. John A. Webb has been appointed General Freight and Passenger Agent, with office in Natchez, Miss. He will continue to act as Auditor also.

New Hampshire Railroad Commission.—The New Hampshire Railroad Commissioners have chosen O. C. Moore, of Nashua, Chairman of the Board, and E. B. S. Sanborn Secretary.

Northeastern, of Georgia.—Mr. Augustus Hall, of Athens, Ga., has been appointed Receiver of this road.

Ohio Central.—The Court of Common Pleas of Lucas County, O., has appointed Mr. John E. Martin Receiver. Mr. Martin has been Vice-President and General Manager for some time.

Pacific Railroads Commissioner.—Under the agreement just made between the Pacific railroads, Mr. John C. Gault has been appointed Commissioner, and has accepted the appointment on condition that he be allowed to have his headquarters in Chicago. Mr. Gault was recently General Manager of the Wabash road.

Pittsburgh & Western.—The officers of this company as consolidated are: President, James Callery, Allegheny, Pa.; Vice-President, Solon Humphreys, New York; Directors, John W. Chalfant, John E. Downing, Philip Krebbs, J. J. McKelvey, Charles W. Mackey, A. M. Marshall, Max Morehead, Henry W. Oliver, Jr., James Painter, Jr., Wm. Semple, John T. Terry.

Pontiac, Oxford & Port Austin.—The officers of this company are as follows: Joseph P. Hale, President, New York; Chas. A. Carpenter, Vice-President, Pontiac, Mich.; F. H. Carroll, Secretary and Treasurer, Oxford, Mich.; Geo. W. Debevoise, General Superintendent, Oxford, Mich.; Jame Houston, Assistant Superintendent and General Freight and Passenger Agent.

Rogersville & Jefferson.—Mr. James Cooper has been chosen Secretary and Treasurer in place of E. M. Ross, resigned.

St. Paul, Minneapolis & Manitoba.—The following changes are announced taking effect Oct. 1, 1883: Mr. A. Guthrie is appointed Superintendent of the Northern Division, with headquarters at Crookston, Minn.; Mr. W. S. Kemp is appointed Superintendent of the Breckenridge Division, with office at St. Paul.

Shenango & Allegheny.—Mr. James T. Blair, long General Superintendent of this road, has been appointed General Manager. The office of General Superintendent is abolished.

Wagner Sleeping Car Co.—Mr. Wells Dygert has been appointed Superintendent at Detroit, Mich., in place of A. R. Winfield, resigned.

Wilmington & Northern.—The following circular from President H. A. Du Pont is dated Wilmington, Del., Oct. 1:

"The offices of Engineer and General Superintendent, and of Superintendent of Transportation, are hereby abolished. Mr. J. H. Thompson, late Engineer and General Superintendent, is appointed Chief Engineer, to take effect from this date. Mr. Alfred G. McCausland, late Superintendent of Transportation, is appointed Superintendent, to take effect from this date."

Wisconsin, Iowa & Nebraska.—Mr. Geo. C. McMichael has been appointed Superintendent of the Iowa Improvement Co. (vice Mr. Geo. F. Woolson, resigned June 21, 1883) and on Sept. 25 took charge of the constructing and operating of the Wisconsin, Iowa & Nebraska Railway.

Mr. Williard T. Block has been appointed Auditor and Local Treasurer of the company, and assumed his duties on the same date.

Union Pacific.—Mr. W. C. Borland is appointed General Agent of the passenger and ticket department of this company, with headquarters at Salt Lake City, Utah, taking effect Oct. Mr Borland has charge of the passenger business Utah and Idaho, and in Nevada, east of Winnemucca.

PERSONAL.

—Mr. Leon Yelton has resigned his position as Car Accountant of the Kentucky Central road.

—Mr. C. O. Johnson has resigned his position as General Freight and Passenger Agent of the Natchez, Jackson & Columbus road.

—Mr. G. A. Haggerty has resigned his position as Superintendent of machinery and motive power of the Chesapeake, Ohio & Southwestern road.

—Mr. David B Sibley, for two years past Purchasing Agent of the Atlantic & Pacific road, and previously connected with the Chicago, Burlington & Quincy, died in Chicago, Sept. 5, aged 48 years.

—Mr. George W. Ristine has resigned his position as General Manager of the Texas & St. Louis road for business reasons. Mr. Ristine was Assistant to the General Manager of the Denver & Rio Grande before going to the Texas & St. Louis, and had been previously Manager of the Empire Line.

—Mr. W. G. Swan has resigned his position as General Traffic Manager of the Chicago, Milwaukee & St. Paul road, on account of continued ill-health. Mr. Swan has been connected with the road for several years, and had previously served on the Chicago & Northwestern and the old West Wisconsin roads.

—Mr. Emil Woblers, one of the firm of Nathan & Dreyfus, of New York, died in Vienna, Austria, Sept. 29. He was born in Lubeck, Germany, and at the time of his death was 37 years old. He was educated at the Polytechnic School at Hanover and started in business in Halle in an establishment engaged in manufacturing agricultural machinery and stationary engines. Afterward he was employed in a locomotive shop in Germany. Then he went to Vienna, where he met Mr. Friedmann, the inventor of the injector which bears his name, and took charge of his works and made many improvements in the steam jet apparatus, which were manufactured by Mr. Friedmann. He came to this country in 1874 and engaged with Messrs. Nathan & Dreyfus, who had then begun the manufacture of the Friedmann injector. He entered upon his duties with great energy and enthusiasm, and made many improvements in the instruments manufactured by the firm. His ability led his employers to give him an interest in the business nearly two years ago. He made many friends among those with whom he was brought into contact, and his death will be sincerely regretted by a wide circle of friends. He leaves a wife and two children.

—Mr. S. S. Montague, Chief Engineer of the Central Pacific Railroad, died at Shasta, Cal., Sept. 24, aged 47 years. He has been in failing health for some time, but had partially recovered, and at the time of his death had gone to the northern end of the Oregon Division to superintend the work. He leaves a wife and several children, living in Oakland, Cal. Mr. Montague was born in Rockford, Ill., and had been on the Central Pacific over 20 years, nearly all his

active professional life. He was first employed on that road when still a young man, and was shortly afterward made Assistant to Chief Engineer Judah, who made the surveys for the main line over the Sierra Nevada. Under him Mr. Montague had charge of these surveys, and located the very difficult line from the summit of the Sierra down into the Truckee Basin over a country hardly thought practicable at the time. When Mr. Judah died, in March, 1863, in the midst of the work, Mr. Montague took it up and remained in full charge of the location of the road, although he was not formally appointed Chief Engineer until 1868, when the main line was well advanced toward completion. Later he had charge of the location of the San Joaquin Valley Branch, the Oregon Division, the Northern, the San Pablo & Tulare and other branches of the road in California, and all the engineering work of the company was done under his direction. Mr. Montague was unquestionably an engineer of great ability, and in the Central Pacific and its branches he leaves behind him an enduring monument, the greatness of which is not fully appreciated by Eastern engineers.

TRAFFIC AND EARNINGS.

Railroad Earnings.

Earnings for various periods are reported as follows:

	1883.	1882.	Inc. or Dec.	P. c.
Nine months ending Sept. 30:				
Denver & R. G...	$5,380,600	$4,762,799	I. $617,801	13.0
Eight months ending Aug. 31:				
Cleve., Col., Cin. & Ind	$2,710,091	$2,645,830	I. $64,261	2.4
Norfolk & West..	1,690,334	1,438,655	I. 251,679	17.5
Net earnings...	737,742	604,823	I. 132,919	22.0
Phila. & Reading.	17,482,986	13,533,948	I. 3,949,038	29.2
Net earnings...	7,985,742	5,759,656	I. 2,226,086	38.6
P. & R. Coal & Iron Co	10,477,659	9,309,933	I. 1,167,726	12.5
Net earnings...	278,618	594,023	D. 315,405	53.1
West Jersey	871,988	778,902	I. 93,086	11.8
Net earnings...	371,534	365,097	I. 6,437	1.8
Month of August:				
Cleve., Col., Cin. & Ind	$436,318	$423,777	I. $12,541	3.0
Norfolk & West..	261,711	222,161	I. 39,550	17.8
Net earnings...	138,833	115,621	I. 23,212	20.1
Phila & Read....	3,538,043	1,975,993	I. 1,562,040	79.1
Net earnings...	1,918,942	950,085	I. 968,887	101.9
Ph. & R. Coal & Iron Co.....	1,866,105	1,615,208	I. 250,897	15.5
Net earnings...	133,647	221,214	D. 87,577	39.0
West Jersey .	215,986	199,246	I. 16,740	8.4
Net earnings...	119,540	109,296	I. 10,244	9.4
Month of September:				
Denver & R. G...	$719,500	$595,200	I. $122,300	20.5
Third week in September:				
Bur., C. R. & N....	$59,138	$59,773	I. $365	0 6
Ches. & Ohio. ...	85,410	81,696	I. 3,714	4.5
Eliz., Lex. & B. Sandy	17,266	10,561	I. 6,705	63.2
Chi. & E. Ill	36,698	45,731	D. 9,033	19.8
Cleve., Ak. & C..	11,836	12,454	D. 618	4.9
Flint & Pere M...	51,954	42,271	I. 9,683	21.0
Peoria, Dec. & E.	15,293	13,124	I. 2,169	16.6
Wisconsin Cent..	30,034	....	.....	....

Weekly reports of earnings are usually partly estimated, and are subject to correction by later statements.

Grain Movement.

For the week ending Sept. 22 receipts and shipments of grain of all kinds at the eight reporting Northwestern markets and receipts at the seven Atlantic ports have been, in bushels, for the past eight years:

	Northwestern receipts.	—Northwestern shipments.— Total.	By rail.	P.c. by rail.	Atlantic receipts.
Year.					
1876 ...	6,217,476	4,225,204	1,797,847	42.5	3,192,147
1877.....	7,338,814	5,096,778	1,119,699	22.0	5,79 ,479
1878	5,317,775	4,484,885	1,306,668	29.1	5,609,964
1879....	6,920,779	5,063,693	1,443,261	28.5	7,18., 91
1880.....	8,329,942	6,098,442	1,952,753	32.0	6,274,954
1881. ...	5,991,875	4,448,928	2,566,493	57.7	4,672,362
1882.....	5,376,306	4,063,896	1,752,698	37.6	4,523,565
1883.....	8,687,256	6,919,691	2,599,793	37.6	5,130,274

Thus the receipts of the Northwestern markets for the week were larger than in the corresponding week of any previous year and 3,311,000 bushels (61 per cent) more than last year. They were, however, 332,000 bushels less than in the previous week of this year, and were the smallest for four weeks.

The shipments of the week were also larger than in the corresponding week of any previous year, and 2,256,000 bushels (48 per cent) more than last year. They were, however, 309,000 bushels less than in the previous week of this year, and 619,000 less than in the week before that. Of the total shipments 224,112 bushels went down the Mississippi.

The Atlantic receipts, though 607,000 bushels more than in the corresponding week of last year and still more than in 1881, were less than in many of the four years from 1878 to 1880, inclusive. They were 488,000 bushels less than in the previous week of this year, and, considering the large shipments of the Northwestern markets for the three preceding weeks, they were noticeably small.

The decline in the Northwestern receipts of the week was chiefly at St. Louis and Detroit. There was a large increase at Milwaukee and Duluth, which shows that the Minnesota and Dakota spring wheat is coming forward. Duluth in the second and third weeks of September received 730,020 bushels, which is more than its receipts for the four months ending with August. Its receipts have always been in the fall chiefly.

Exports from Atlantic ports for the week to Sept. 22 for four years have been:

	1880.	1881.	1882.	1883.
Flour, bbls.....	154,809	130,131	230,371	166,405
Grain, bu.....	4,480,472	3,022,800	3,488,682	2,405,642
Total, bu... ..	5,177,112	3,608,389	4,529,851	3,154,464

The reports are thus less than in 1881 even, and nearly a third less than last year.

Buffalo grain receipts by lake from the opening of navigation up to Sept. 30 were as follows, flour in barrels and grain in bushels, flour being reduced to wheat in the totals:

	1883.	1882.	Increase.	P. c.
Flour.....	1,508,154	1,196,254	311,900	26.0
Grain.....	48,657,649	34,531,725	14,125,924	40.9
Total, bushels..	56,198,419	40,512,995	15,685,424	38.7

The total receipts are the largest since 1880; the flour receipts are the largest reported in eleven years.

Shipments eastward of grain received by lake for the same period were as follows, in bushels:

	1883	1882.	Inc. or Dec.	P. c.
By rail.....	10,434,574	8,560,367	I. 1,874,207	21.9
By canal.....	32,327,286	21,464,184	I. 10,863,102	50.6
Total.	42,761,860	30,024,551	I. 12,737,309	42.4
Per cent. by rail	24.4	28.5	D. 4.1	....

The canal opened April 20 this year and May 17 in 1881. The number of boats cleared from Buffalo on the canal from the opening to Sept. 30 this year was 6,640; last year, 5,804, showing an increase of 826, or 14.4 per cent.

Coal.

Coal tonnages for the week ending Sept. 22 are reported as follows:

	1883.	1882.	Inc. or Dec.	P.c.
Anthracite.....	731,366	713,304	I. 18,062	2.5
Semi-bituminous	121,134	118,866	I. 2,268	1.9
Bituminous, Penna	63,371	61,469	I. 1,902	3.1
Coke, Penna	60,134	44,794	I. 15,340	34.1

An active demand for the sizes of anthracite most used for domestic purposes continues, but the sizes generally used for steam purposes are in light request.

For the semi-bituminous coals an increased demand and more active market are reported. Clearfield shippers complain of a scarcity of cars.

The coal tonnage of the Pennsylvania Railroad for the week ending Sept. 22 was as follows:

	Coal.	Coke.	Total
From lines of road.....	124,581	50,038	174,619
From other lines	54,262	10,096	64,358
Total.....	178,843	60,134	238,977

The total tonnage this year to Sept. 22 was 8,629,561 tons, against 7,974,956 tons to the corresponding date last year, showing an increase of 654,605 tons, or 8.2 per cent.

The anthracite coal tonnage of the Belvidere Division, Pennsylvania Railroad, for the nine months ending Sept. 29 was:

	1883.	1882.	Inc. or Dec.	P.c.
Coal Port for shipment...	87,615	67,727	I. 19 888	29.2
S. Amboy for shipment..	474,833	550,339	D. 75.507	13.7
Local points on N. J. div.	602.528	529,746	I. 72,782	13.7
Co.'s use on N. J. divs....	118,857	95.322	I. 23,535	24.8
Total.....	1,283,832	1,243,134	I. 40,698	3.3

Of the total tonnage this year 1,043,608 tons were from the Lehigh Region, and 240,224 tons from the Wyoming Region.

Cumberland coal shipments for the nine months ending Sept. 29 are reported by the Cumberland *Civilian* as follows:

Shipments from mines:	
Cumberland & Pennsylvania R. R.....	1,195,542
George's Creek & Cumberland.....	394,436
West Virginia Central & Pittsburgh.....	238,356
Direct from mines to Baltimore & Ohio...	33,019
Total...	1,861,353
Shipments out of region:	
Baltimore & Ohio R. R.....	1,026,100
Bedford Division, Pennsylvania R. R.....	327,550
Chesapeake & Ohio Canal.....	507,703
Total....	1,861,353

Local shipments are included in the Baltimore & Ohio tonnage. The Baltimore & Ohio had 55.1 per cent.; the Pennsylvania Railroad 17.6, and the Chesapeake & Ohio Canal 27.3 per cent. of the total tonnage.

Cotton.

The movement of cotton, as reported by the *Commercial and Financial Chronicle* for September, the first month of the cotton year, was as follows, in bales:

	1883.	1882.	Inc. or Dec.	P.c.
At Seaports:				
Receipts.	319,507	296,957	I. 22,550	7.6
Exports...	117,284	118,326	D. 1,042	0.9
Stock on hand, Sept. 28..	336,919	214,807	I. 122,112	56.8
At Interior Markets:				
Receipts.....	219,462	194,037	I. 25,425	13 1
Stock, Sept. 28.....	105,778	46,222	I. 59,556	128.8

The seaports showing the heaviest receipts this year were: Savannah, 78,876; Galveston, 67,892; New Orleans, 59,254; Charleston, 58,797; Norfolk, 19,258, and Mobile, 11,531 bales. Of the total seaboard receipts the Gulf ports (Mobile, New Orleans, Galveston, etc.) had 44.5 per cent.; the Atlantic ports from Charleston south (Charleston, Savannah, Port Royal and Jacksonville), 43 7 per cent.; the Atlantic ports from Wilmington to Norfolk, 10.5 per cent., and the North Atlantic ports (Baltimore, Philadelphia, New York and Boston), 1.3 per cent.

The interior markets reporting the heaviest receipts this year were: Houston, 59,764; Atlanta, 18,937; Augusta, 17,981; Montgomery, 16,495 bales. Naturally the Texas cotton leads thus far, being the earliest to mature.

Lake Superior Iron Ore.

Shipments of iron ore from the Lake Superior Region up to Sept. 27 are reported by the Marquette *Mining Journal* as follows, in tons:

	1883.	1882.	Inc. or Dec.	P.c.
L'Anse.....	52,457	49,799	I. 2,658	5.3
Marquette.....	530,750	764,646	D 233.896	30.5
Escanaba....	1,051, 84	1,371,569	D. 290,285	21.2
St. Ignace.....	32,233	41,262	D. 9,129	22 2
Total..... ..	1,696,724	2,227,276	D. 530,652	23.8

Of the shipments from Escanaba this year, 286.358 tons were from the Marquette District and 794,926 tons from the Menominee District. Besides the ore shipped from Marquette there were 7,819 tons delivered to local furnaces. The shipments of pig iron this year were 6,865 tons.

Petroleum.

The production of the Pennsylvania and New York oil wells for August is given as follows by Stowell's *Petroleum Reporter*, in barrels of 42 gallons:

	1883.	1882.	Inc. or Dec.	P. c.
Production.....	1,879,437	3,104,495	D. 1,225.058	39 8
Shipments	2,086,478	2,047,545	I. 38,933	1.9
Stock, Aug. 31.	36,164,881	31,772,094	I. 4,392,787	13.8
Producing wells	17,100	19,600	D. 2,500	12.8

The production is the smallest reported for any month this year, except March and April. It was exceeded in every month of 1882 and 1881, and in eleven months of 1880. Of the total production the Alleghany District in New York furnished 15.4 per cent.; the Bradford District in Pennsylvania, 57.8 per cent.. the Warren District, 13.9 per cent., and the Lower District, 12.9 per cent.

The shipments for the month exceeded the receipts, as was the case in two months (April and May) of the present year, but not previously for several years.

The stock reported was all in the pipe lines. It was reduced during the month by 207,041 barrels, which is the excess of shipments over production.

There were 309 new wells reported finished during the month, and 26 dry holes. On August 31 there were 315 new wells reported in process of drilling.

The shipments for the month were as follows:

	Barrels.	Per ct. of total.
New York.....	837,411	40 2
Philadelphia.....	283 804	13.6
Baltimore..	38,837	1 9
Boston	22,960	1.1
Cleveland.....	492,005	23.6
Pittsburgh.....	59,376	2 8
Local points	194,321	9 3
Refined at Creek refineries.....	156,914	7.5
Total	2,086,478	100.0

Shipments of oil refined at Creek refineries (reduced to its equivalent in crude) were: To New York, 66,945; Philadelphia, 162; Baltimore, 390; Boston, 61,997; local points, 27,420; total, 156,914 barrels. Boston shipments for the month formed an unusually large proportion of both the crude and refined shipments.

Of the shipments from the wells 375,980 barrels, or 18.0 per cent., are reported as by rail, and 1,710,598 barrels, or 82.0 per cent., by pipe line.

The Chicago-Indianapolis Passenger War.

On Monday last the condition of affairs in the passenger business between Chicago and Indianapolis was somewhat changed. The Louisville, New Albany & Chicago road continued to sell tickets between Chicago and Indianapolis for $1, but the Pan-Handle and the Cincinnati, Indianapolis, St. Louis & Chicago were not cutting rates, and the Chicago & Eastern Illinois had withdrawn from its low rate of the previous two or three days. Freight rates had not been touched, and the future action of the roads concerned was uncertain. A restoration of rates has since been agreed on.

Chicago Belt Line Transfers.

The Belt Railway Co., of Chicago, has issued the following circular:

"The Belt system having been completed, and connections made with all lines centering in this city, it will be opened for business Oct. 1, at which time the company will be ready to make transfers between all roads with promptness and dispatch.

"The following rules have been adopted governing the business: This company will pay no charges upon any transfers except to parties located upon the line of its railway who do not maintain an office in the city; expense bills on such transfers can be delivered to this office for collection.

"All cars, loaded or empty, must be carded to the road to which they are to be transferred. When for a point upon the line of this road, name of consignee must be given upon the card. Our agents will receipt for all cars delivered to us, and we shall require receipts from the road or consignee to whom we make the delivery.

"All cars must be accompanied by a manifest, showing the initial and number of each car, loaded or empty, and condition of seals; a separate manifest must be furnished for each road's or consignee's transfers. All manifests should be numbered consecutively, commencing with No. 1 each month; these manifests will accompany the cars, and receipt taken upon them for the cars, when delivered to the road or consignee transferred to. At the close of the month these manifests will be attached to our bill against the roads as our authority for such charge. No cars will be received unless accompanied with a manifest. In addition to the manifest, no loaded car, except to consignees on the line of this road, will be received unless accompanied with na expense bill.

"On all interchange of through business between railroads the rates will be $1 per loaded car and 50 cents per empty car; on all other business the rates quoted in local tariff No. 2 of this date will govern. It must be distinctly understood that the road (or consignor if on our line) delivering us the cars, either loaded or empty, will be held for our charges. Transfer charges against the railroads will be considered as track service, and bills for the same will be rendered monthly.

"Hereafter all communications regarding rates, etc., should be addressed to Mr. A. S. Dunham, Secretary."

The Pacific Railroads' Agreement.

The managers of the Pacific railroads in conference in San Francisco on Sept. 28 closed their labors by the adoption of agreements the substance of which is as follows: Portland and San Francisco to be common points taking the same rates to and from the East. The Northern Pacific to make the same through rates to San Francisco, *via* Portland, that the other roads make to San Francisco direct; and the latter are to make the same through rates to Portland, *via* San Francisco, that the Northern Pacific makes to Portland direct. All the lines are to maintain the present regular rates, except as modifications are hereafter to be mutually agreed upon. A commissioner is to be appointed empowered to settle all disputed points and enforce a penalty on any company violating the agreement. The Northern Pacific is given some advantages north of the California state line to points other than Portland and Astoria; the other lines are given corresponding advantages to points in California other than San Francisco. The agreement goes into effect Oct. 1, and expires by limitation on Dec. 31, 1884, but it is terminable at anytime on 90 days' notice from any of the companies. No changes were made in through rates. The Northern Pacific will adopt the same rates on through freight to and from Portland as those which have been in existence on the old route between the East and San Francisco.

The question of the control of the Atlantic & Pacific was not raised, an understanding on this point having been reached by the Southern Pacific and Atchison, Topeka & Santa Fe roads. The roads outside of the Northern Pacific will among themselves continue to maintain the same proportions in the distribution of through earnings as heretofore existed.

The managers agreed upon Mr. John C. Gault, late General Manager of the Wabash, as Commissioner under the agreement.

It is announced that the through first-class rate from Omaha to San Francisco and Portland will be $95; an ironclad ticket is to be used, and Portland passengers to surrender their tickets in San Francisco and receive there a new ticket to Portland by steamer.

The Chicago-Ohio River Pool.

A meeting of representatives of the roads between Chicago and the Ohio River points was held in Cincinnati Oct. 2. The first day was devoted to discussion of the various points at issue.

Of the second day's session a dispatch from Cincinnati says: "The second meeting of the representatives of the Chicago-Ohio River pool lines was held with closed doors at the Grand Hotel from 11 o'clock this morning until late this afternoon. The report of the committee appointed yesterday was considered by sections and adopted. The passenger rates are to be restored at midnight Thursday. The general freight agents are to meet in Chicago on Friday, and the general passenger agents at the same place on Saturday, to complete the details of the plan agreed upon. A general meeting will be held at Louisville on Monday next, to ratify the entire business. L. D. Richardson was appointed Pool Commissioner. The executive committee is composed of the general managers of all roads interested in the pool, with V. T. Malott, of Indianapolis, as President."

Northern Pacific Through Rates.

A dispatch from St. Paul, Minn., Oct. 3, says: "The new through passenger rates of the Northern Pacific Railroad, which went into effect this month, are: St. Paul to Portland, $95, a reduction of $5; to San Francisco, $95, a reduction of $25; to Tacoma, $95, a reduction of $12; to Seattle, $95, a reduction of $13; to Townshend, $98, a reduction of $13; to Victoria, $11, a reduction of $12. East of Portland rates have also been reduced and graded back to Ainsworth. Rates south of Portland, on the Oregon Railway, are based on the reduced rates to Portland.

"Freight rates from Boston or New York to Portland or San Francisco are, per hundred pounds: First-class, $5;

second class, $4 ; third class, $3.25 ; fourth class, $2.50 ; class A, $2.25 ; B, $2 ; C, $1.75 ; D, $1.50.

"Special agents have been appointed upon the Montana, Yellowstone, Missouri and Dakota divisions of the Northern Pacific Railroad, whose sole duty it will be to look after the comfort of immigrant passengers. They are to go from one train to another and see that the cars are properly lighted and heated, and make all necessary arrangements at the various eating-houses."

Commissions on Passenger Business.

A dispatch from Chicago, Oct. 3, says: "A circular is published here issued by the General Passenger Agent of the Pennsylvania Railroad Co.'s lines stating that that company will resume the practice of paying a commission to regular ticket agents."

Unemployed Mississippi Steamboats.

A telegram from St. Louis says: "The decay of the steamboating interest of St. Louis is shown by the remarkable fact that at present not less than 20 fine steamers, 44 barges and 18 scows are lying unemployed at the levee between Washington avenue and the arsenal. At the very lowest calculation the above tonnage represents $2,000,000, and probably six or seven times that amount. Even take $2,000,000 at 10 per cent. per annum, which any well-regulated boat ought to earn, and the annual loss to the investors is $200,000. This is an exceedingly small estimate. Some of these boats are laid up eight months in the year."

OLD AND NEW ROADS.

Allegheny Valley.—This company gives notice that the cash fund applicable to the payment of the interest due on Oct. 1 on the income bonds will admit of a pro rata distribution of $8.50 on each $35 coupon, and the deficit will be paid in scrip convertible into new income bonds, in accordance with the terms of the bonds.

Atchison, Topeka & Santa Fe.—This company has closed a sale to parties represented by Watson & Thorpe, of Topeka, Kan., of all the lands remaining unsold along the line of the road between Topeka and the west line of Marion County, about 150 miles. The price agreed on is $3.19 per acre. The land department has not yet reported the exact amount of the land sold.

Atlantic & Pacific.—Officers of this company, the Southern Pacific, the Central Pacific, the Atchison, Topeka & Santa Fe and the St. Louis & San Francisco are in conference in San Francisco this week for the purpose of making arrangements for the fall opening of this road for through business. Time schedules for through passenger trains are to be arranged and a division of rates agreed on for through passenger and freight business.

Augusta & Knoxville.—At a special meeting held in Augusta, Ga., Sept. 26, the stockholders voted unanimously to ratify the lease of the road to the Port Royal & Augusta Co., under which that company has already taken possession of the road.

Baltimore & Ohio.—Work is progressing well on the Rock River Branch of the Newark, Somerset & Straitsville Division. This extension will be three miles long, and will reach several coal mines.

Boston & Albany.—The board of directors has decided to reduce local fares on Nov. 1 from the present rate of 2½ cents to 2¼ cents per mile; also to sell 1,000-mile tickets at 2 cents per mile, these tickets to be transferable so that they can be used to pay the fares of a party of people as well as an individual. Package tickets will also be sold, good for any time, and the coupon ticket books will not be limited to any fixed date. At the same time changes are also to be made in the suburban fares to and from Boston. The book or coupon ticket, allowing the purchaser, and him only, 162 rides within 13 weeks, will be superseded by a 100-ride ticket good not only for the purchaser, but for his family and employés, between the two stations named upon it until the 100 rides have been taken. The price of these 100-ride tickets will be somewhat higher than that hitherto charged for the book or season tickets; that is, it will be higher, reckoning the latter to be used once each way daily. For instance, the cost at present between Boston and Newton to the holder of a season ticket who uses it twice a day is about seven cents a trip, whereas, with the new 100-trip tickets it will be 10 cents a trip The holder, however, can take along his family or employés at the same rate, and this advantage will be supposed to counterbalance the increased cost. The general purpose is to make no suburban rate for the 100-trip tickets less than 1½ cents a mile.

At the regular meeting of the board last week action was taken on the stock dividend which has been anticipated ever since the company bought the state stock. The action of the directors was as follows:

"*Voted*, That the Treasurer be authorized to distribute to private stockholders of the corporation at the close of business on Sept. 27, 1883, one share of stock for every 10 shares held by them respectively, and to issue assignable certificates for fractional rights, convertible into stock at the rate of one share for every 10 rights, if presented at the Treasurer's office on or before the 20th day of December, 1883, in lots of 10 or multiples of 10."

The stock to be so distributed is the 24,115 shares formerly owned by the state of Massachusetts, in exchange for which the company last year issued its 5 per cent. bonds to the amount of $3,858,000. The stock outstanding is $175,885 shares. so that 17,588 shares will be required for this distribution, leaving 6,627 shares in the treasury. The distribution will therefore increase the amount of outstanding securities by $1,758,800 stock, and if the usual 8 per cent. dividends are kept up, will increase the yearly payments by $140,704. The yearly payments were not diminished by the purchase of the state stock, as the interest on the 5 per cent. bonds issued in payment for it is of equal amount to the dividends previously paid.

Boston, Hoosac Tunnel & Western.—Track is now laid on the extension of this road from a point near Schenectady, N. Y., southwest to Rotterdam Junction on the New York, West Shore & Buffalo road. This connecting track is 7 miles long and will complete the road at the west end, according to the agreement made when the rights and franchises west of Schenectady were sold to the West Shore Co. The work of ballasting the new track is in progress.

Boston & Lowell.—The Boston *Advertiser* of Oct. 3 says: "Whether it is the Grand Trunk, the Central Vermont, or any other railroad company forming a part of the through line to Montreal, which desires to lease the Boston & Lowell, its objects in doing so are manifestly to secure a terminus in Boston and to obtain control not only of the Boston & Lowell proper, but also of its leased connections on the north — the Nashua & Lowell, Wilton, Peterboro and Stony Brook roads—in order to form a consolidated through line. It is safe to say that unless the lease of the Boston & Lowell should carry with it the control of these lines also, no lease would be desired. But it is not generally known that by the terms of the lease of the Nashua & Lowell and its branches to the Boston & Lowell, the latter company is debarred from 'sub-letting, assigning or transferring the control' of the former roads without the consent in writing of the board of directors of the Nashua & Lowell. The Hon. F. A. Brooks is President of the latter company, and though he is a strong supporter of the policy of leasing the Nashua & Lowell to the Boston & Lowell, believing that the two roads should be under one management, he is said to have been very strenuous for the insertion of this clause in the lease, as a safeguard against the handing over of the Nashua & Lowell to any other corporation, whose interests might be inimical to those of his road. In this clause, probably, lies one of the most serious obstacles to the success of any attempt to lease the Boston & Lowell to the Grand Trunk or the Central Vermont. Mr. Brooks and his directors, it is believed, would never give their consent to the transfer of the Nashua & Lowell lease to either of the companies named, even if the stockholders of the Boston & Lowell should vote in favor of leasing their road, and with the Nashua & Lowell under independent management, it is not likely that either of the northern roads would care to lease the Boston & Lowell. The latter road is now earning, as has been stated, about 7 per cent. net, and any company desiring to lease it would doubtless have to guarantee the stockholders at least an equal rate of income after paying all interest and fixed charges. It is not probable, therefore, that any lease of the Boston & Lowell will be made at present, or indeed for a long time to come."

Camden, Gloucester & Mt. Ephraim.—It is stated that this road has been sold to the Philadelphia & Reading Co., and that it will be changed from 3 ft. to standard gauge as soon as possible. The road extends from Camden, N. J., to Mt. Ephraim, 6 miles. The chief object of the purchase is to secure the terminal property in Camden, which is valuable, and the ferry to Philadelphia. These will be used for the Philadelphia & Atlantic City road, which the Reading has purchased, the terminal station of that road in Camden being insufficient and badly located.

Canada Atlantic.—A dispatch from Montreal says: "A writ of injunction has been issued by the Superior Court here, restraining the Canada Atlantic Railway from floating $3,500,000 of bonds upon the New York and London markets. The suit is brought by Daniel S. Stanton, a railway contractor of New York, and A. P. Balch, a civil engineer, of Hanover, N. H., to secure a claim of theirs for $400,000, created under an agreement entered into with the Coteau & Province Line Railway & Bridge Company and the Ottawa City Junction Railway. By this, it is claimed, they were to obtain an act of amalgamation from the Dominion government, which they did at an outlay of $20,000, and in consideration for which they were to be awarded the contract for building the amalgamated Canada Atlantic road from the capital of the Dominion to a point in the State of New York, payment to be guaranteed them by depositing the bonds of the road with two trustees to be named by them. The Central Vermont Railroad, which was interested in the two original companies, was also a party to this agreement, and at the completion of the road was to lease it ; but it is now alleged that soon after the work was commenced, fearing a possibility of the road passing into the hands of the Canadian Pacific, the Central Vermont with its powerful ally, the Grand Trunk, conspired to oust Stanton & Balch from the contract. This they accomplished, and to-day virtually own the road, while the original contractors claim that they have not received a cent, either for the expenses incurred in obtaining the charter or for work performed. They now bring this suit not only to restrain the floating of the bonds, but also to seize them in the hands of the Bank of British North America, where they are deposited for advances."

Cape Fear & Yadkin Valley.—On the extension of this road northwest to Greensboro track is now laid from the old terminus at Gulf, N. C., 8 miles, and work is progressing steadily.

On the extension from Fayetteville, N. C., southward to Florence, S. C., the grading is now well advanced, and tracklaying has been begun.

Carolina Central.—This company has bought the Cowan property in Wilmington, N. C., for $10,000, and will fit up the house as the general offices and headquarters of the company.

Chicago, Fairchild & Eau Claire River.—This road has been for some time under construction from Fairchild, Wis., on the Chicago, St. Paul, Minneapolis & Omaha road, east by north to Spencer, on the Wisconsin Central, the distance being about 85 miles. It is intended chiefly as a lumber road. Track is reported laid for 13 miles from Fairchild, with work progressing steadily.

Chicago & Great Southern.—For some months past this road has been in operation from the junction with the Louisville, Albany & New Chicago road at Fair Oaks, Ind., southward to Pine Village, 45 miles, and has also had a section (the old North & South road) in operation from Attica to Yeddo, 22½ miles. These sections have now been united by laying track from Pine Village south to Attica, 12½ miles, completing the line of 80 miles from Fair Oaks to Yeddo.

Chicago & Northwestern.—On the Sioux River Branch of this road the track is laid to a junction with the Redfield Branch at Watertown, Dak., 18½ miles north by west from the late terminus at Castlewood, and 49 miles from the junction with the Dakota Central line at Watertown Junction, 3½ miles west of Brookings. The branch is not yet opened for traffic.

Chicago, St Paul, Minneapolis & Omaha.—On the new branch or extension of the Nebraska Division track is now laid from Wakefield, Neb., on the Norfolk Branch, northwest to Coleridge, 24 miles, and the line is open for traffic. The stations on the new line are Concord, 10 miles from Wakefield, and Coleridge, 24 miles.

Chicago & Western Indiana.—At a meeting of the board in Chicago last week contracts were let as follows for the new passenger station in that city, on which work is to be begun at once: Masonry and plastering for the whole building, Joseph Downey; carpenter and joiner work, E. Hudson; iron work, H. A. Streeter, of Globe Iron Works; steam-heating, Fred Tutor & Co.; roofing, Knisely & Miller; painting, J. B. Sullivan & Brother; terra cotta, Perth Amboy Terra-Cotta Co. The estimated cost of the station is about $500,000, and it will be one of the finest passenger stations in the city.

Chippewa River & Menominee.—This company has filed articles of incorporation in Wisconsin to construct a line from Chippewa Falls to Lake Court Oreille with several small branches. The capital stock is $1,500,000. The incorporators are S. W. Chinn and O. H. Ingram, of Eau Claire ; Fred Weyerhauser, of Rock Island ; and E. W. Culver and Wm. Irwin, of Chippewa Falls.

Cincinnati, Green River & Nashville.—The County Court of Davidson County, Tenn., has voted to accept the proposition made by this company and to levy a tax sufficient to pay one-half the cost of a bridge over the Cumberland River at Nashville which is to be used both as a railroad and a highway bridge. The company agrees to extend its road to Nashville within a reasonable time. It is now in operation from Grove City, Tenn., on the Cincinnati Southern road, west to King's Mountain, 8 miles.

Cincinnati, Selma & Mobile.—It is again stated that the Central Railroad Co., of Georgia, has about concluded a lease of this road. The final settlement depends somewhat upon an examination of the road which the Central engineers are now making.

Cleveland, Columbus, Cincinnati & Indianapolis.—The statement of this company for the six months ending June 30, was published last week, but did not include the earnings of the leased lines, which are now given below :

	—Cin. & Sp'gf'ld—		—Ind. & St L.—	
	1883.	1882.	1883.	1882.
Earnings	$430,462	$438,677	$990,061	$870,636
Expenses	344,505	404,417	967,845	982,278
Net earnings	$85,957	$34,260	$22,216	*$111,642
Rentals, etc	191,785	196,328	337,412	374,000
Deficit	$105,828	$162,068	$315,196	$485,642
Additions to property	9,624	21,142	196,703	...
Total deficit	$115,452	$183,210	$511,899	$485,642

*Loss.

On the Cincinnati & Springfield road there was a decrease of $8,215, or 1.9 per cent., in gross earnings, but a gain of $51,697, or 150.7 per cent., in net earnings, and a decrease of $56,240, or 34.7 per cent., in the deficit, not including betterment expenditures. The working expenses of this road were 80 per cent. of gross earnings this year, against 92.25 per cent. last year.

On the Indianapolis & St. Louis the gross earnings show an increase of $119,425, or 13.7 per cent. A small surplus replaces the deficit shown last year, and the deficit after paying rental (not including the expenditures for additions to property) shows a decrease of $170,446, or 35.3 per cent. The working expenses of this line were 97.75 per cent. of gross earnings this year, against 112.75 per cent. last year.

Columbus & Eastern.—The proposed route of this road is from Columbus, O., east by south to Marietta, about 100 miles, but of this the company will build only 72 miles, as it has leased the use of the Ohio Central track from Columbus to Hadley Junction, 28 miles. It is intended to be a coal road, passing through the Hocking Valley region, and is of standard gauge. The section now under contract is that through the coal region extending from Hadley Junction eastward 55 miles. On this section the maximum grade going west is 26 ft. to the mile and going east, 40 ft. The grading is now substantially completed. Tracklaying was begun Aug. 25 and on Sept. 26 the rails were laid from Hadley Junction east 11 miles, with work steadily in progress.

Corning, Cowanesque & Antrim.—The Cowanesque Valley Branch of this road (which is leased and worked by the Fall Brook Coal Co.) is now completed and opened for business to Harrison Valley, Pa., 6¼ miles westward from the old terminus at Westfield, and 37¼ miles from the junction with the main line at Lawrenceville.

Cornwall & Lebanon.—This road is now completed and was opened for business Oct. 1. Its line extends from Lebanon, Pa., southward to Cornwall, and thence crosses the hills into the Conewago Valley, and follows that valley southwest to Conewago Station on the Pennsylvania Railroad. The distance from Lebanon to Conewago is 22 miles, of which 6 miles has been built by the Cornwall & Lebanon Co., and the remaining 16 miles by the Conewago Valley Co., whose part of the road is leased to the Cornwall & Lebanon Co. The road passes over some valuable beds of iron ore and through a rich agricultural country heretofore some distance from a railroad. The road has been built for local purposes entirely, and is not controlled by any other company.

Denver & Rio Grande.—The Maysville Branch is now completed to Garfield, Col., 9 miles west of the late terminus at Maysville, 16 miles from the junction with the main line at Poncha, and 237 miles from Denver. Garfield is the chief town in the Monarch mining district.

The following circular has been issued to the stockholders of the company from the office in New York:

"The board of directors of the Denver & Rio Grande Railway Co., at a meeting held Sept. 26, 1883:

"*Resolved*, That the stockholders of this company be requested to authorize the mortgaging of its property, present and future, including therein such equitable interests as the company shall acquire in the rolling stock leased, by reason of payment of rental, for the payment of which bonds hereinafter mentioned shall be issued ; and also the leasehold rights and interests of this company in the Denver & Rio Grande Western Railway, and all other property, to secure bonds of the company, payable Oct. 1, 1913, bearing interest at the rate of 5 per cent. per annum, convertible into stock at the option of the holder on 60 days' previous notice; to be issued to such amount as shall, together with the bonds of the company secured by prior mortgages, never exceed $30,000 per mile outstanding at any one time (reckoned upon completed road only), nor at any time $50,000,000 in the aggregate.

"The mortgage securing the bonds to be issued under same will provide for reserving sufficient of this issue to pay off or exchange the present authorized indebtedness of $30,000,000, of which there are now outstanding $26,123,000 bonds on 1,320 miles of completed road. Ten millions will be further reserved, which can only be issued for completing unfinished portions of the line, upon which a large amount of work has been done, leaving about $13,000,000 for the present and future wants of the company, of which latter $5,000,000 will now be disposed of as stated.

"The board has made arrangements, to take effect as soon as the stockholders shall have authorized this mortgage, for the negotiation of $5,000,000 of these bonds by a syndicate, which will furnish the means to meet all requirements of the company upon satisfactory terms; which arrangements secure to each stockholder the right to take his *pro rata* upon the same terms. The board believes this the best plan to meet present and future requirements of the company, and provide means for the capitalization of rental on rolling stock. If the plan meets with your approval, you will please sign the inclosed proxy, and return the same as per inclosure, on or before Monday, Oct. 1, to the Secretary of the company at New York."

This company makes the following statement for the eight months ending Aug. 31:

Actual gross earnings	$4,780,635
Working expenses (63.77 per cent.)	3,048,825
Net earnings	$1,731,810
Income from other sources	114,531
Surplus to meet fixed charges	$1,846,341

The actual gross earnings in July were $709,825, or $62,-

825 more than the estimated earnings as heretofore published. The actual gross earnings in August were $699,603, or $34,103 more than the estimate for the month.

Denver, Utah & Pacific.—The sale of this road, as briefly reported last week, is confirmed by later dispatches. The price paid is said to be $850,000, and the purchasers are parties from Cleveland and Boston, who are interested in the Denver, Longmont & Northwestern road. Mr. Samuel A. B. Abbott represents the Boston party in the syndicate.

The road is completed from Denver, Col., to Longmont, 34 miles, reaching the coal fields at Mitchell, Erie and Canfield. The road will be repaired and extended northward across the Union Pacific to some point not yet fully determined.

Eastern.—The board has ordered the purchase of six new locomotives, to cost $8,000 each.

About 10 years ago this company began to run what was called workingmen's trains between Boston and Lynn, morning and evening, at a low rate of fare, under a statute then recently enacted in Massachusetts. By consent of the Railroad Commissioners and the patrons of the trains, a schedule differing from the strict interpretation of the statute regarding this class of trains was adopted, and proved satisfactory to all concerned, since it was more favorable to the patrons of the road than the requirements of the law itself. A short time since a person for some reason thought it best to circulate among the patrons of the train a petition to the directors to henceforth run these trains strictly in compliance with the law. Of course he found plenty of willing signers. The petition was presented, and a circular just issued announces that on and after Oct. 1 the new schedule of rates for workingmen's quarterly and yearly tickets will go into effect. These tickets are not transferable; and good only on the so-called workingmen's train, and permit but one round trip daily for each week-day, all of which are restrictions not imposed under the old arrangement. Heretofore the Eastern Railroad has sold 20 tickets for $1.20, each good for a ride any time on the workingmen's train between Boston and any station as far out as Franklin Park; 12 tickets for $1, between Boston and Cliftondale, Pleasant Hill and Saugus; and 10 tickets for $1 between Boston and stations as far as Lynn. These tickets were transferable, and were good until used. If a man missed his train or desired to remain in the city to attend the theatre or any other place of amusement, he did not lose his ticket, but could use it some other day. Under the new system all this is changed. While the fares will be a trifle lower than heretofore, the inconveniences will outweigh this advantage. A man will be obliged to pay at one time from $3.40 to $13.40, instead of from $1 to $1.20, and the season ticket can be used only by the rightful owner, and if he does not use it every morning and night during the three months, he loses just so much money. Accordingly, many of the patrons have requested the management to retain the old fares, but the directors reply that their attention having been called to the fact that those rates were not in accordance with the law, they do not feel authorized longer to take the risk of prosecutions.

The Boston *Advertiser* of Sept. 29 says: "There appears to be no difference of opinion among bond and stockholders of the Eastern Railroad regarding the position of Mr. Willard P. Phillips, of the trustees, in his suit to prevent the consummation of the lease of the road to the Boston & Maine. While some of them oppose his views and desire to have the suit withdrawn, all seem to give him credit for inflexible firmness, and for acting in accordance with his view of his duty as trustee, to secure to the creditors of the Eastern Railroad the sinking fund to which the law entitles them, and to prevent the signing of the lease in its present form, which he holds fails to conform to the requirements of the law. The position assumed by Mr. Phillips is substantially this: The act of 1876 authorized the merging of the outstanding bonds, notes, obligations and other liabilities of the Eastern Railroad in a new series of obligations, to be called certificates of indebtedness. These certificates were to be dated in 1876, to run 20 years, and to draw interest, payable semi-annually, at 3½ per cent. for three years; at 4½ per cent. for three years more, and at 6 per cent. for the remaining twenty-four years. These certificates were to be secured by a mortgage to the three trustees, whose appointment was provided for in the act. This mortgage covers not only the real and personal estate of the corporation, and all other items usually included in a railroad mortgage, but also all the net earnings after Sept. 1, 1882, until the amount of certificates is reduced to 10 millions, and after that the first $100,000 of the net earnings annually; all of which is in accordance with the act of 1876. The act also defines what shall constitute net earnings, and provides further, that an account showing the amount on Sept. 1 of each year shall be annually made to the trustees, and the whole amount so ascertained shall be paid to these trustees, and, until the certificates are reduced to $10,000,000, all these net earnings shall be placed in the sinking fund, provided for in the act; also that the proceeds of all outside property, not required in the operation of the road, sold after Sept. 1, 1882, shall also be placed in the sinking fund, and that after the certificates are reduced to $10,000,000, the $100,000 of net earnings annually, if they shall amount to so much, shall also be placed in the sinking fund. The mortgage conforms in all these matters to the act.

"In 1882 authority was given to the Eastern Railroad to issue preferred stock at par, in exchange for certificates of indebtedness at their face value; provided that this issue shall lessen neither the payments nor the security to the certificate-holders. The proposed lease of the Eastern to the Boston & Maine provides that both roads shall be managed for 55 years by the latter corporation; that from the gross earnings of the two roads shall be deducted all operating expenses, including the interest upon all improvement bonds issued, in addition to a charge of 1½ per cent. annually as a contribution to a proposed sinking fund. Neither of the two last charges, Mr. Phillips holds, are defined as operating expenses in the act of 1876. The lease next provides that the fixed charges of both roads shall be paid; then the Boston & Maine is to have the next $630,000, while the next $140,000 are to be divided equally between the two roads; then the Eastern Railroad is to have all of the next $366,000, should so much be earned, which is 6 per cent. upon the shares in its own road and those of leased roads entitled to a dividend of equal amount with the Eastern, and the balance, if any, is to be in the hands of the Boston & Maine, until spent, in equal amounts, in improving both roads. The lease also provides than when preferred stock shall be issued, its dividends shall be paid at the same time as the interest upon the canceled certificates of indebtedness would have been paid, and shall have the same priority of payment; that is, before the Boston & Maine pays its dividend to its own stockholders. Mr. Philips therefore takes the ground that the lease as proposed does not conform to the law under which he is acting as a trustee, and that his duty to secure the sinking fund to the creditors of the Eastern road does not permit him to allow the consummation of the lease in its present form. Able legal authority holds Mr. Phillips's point well taken, and as has already been stated in the *Advertiser*, many persons well versed in railroad and legal affairs believe that Mr. Phillips's suit interposes an insuperable obstacle to carrying out the lease."

Eastern Extension.—This road, which has been owned and operated by the Halifax & Cape Breton Coal Co., was transferred to the Nova Scotia government on Oct. 1, the government paying for the road the appraised valuation of $1,138,000, as provided by agreement. The Eastern extension proper runs from New Glasgow, N. S. to the Strait of Canso, 79 miles, and was built by the Halifax & Cape Breton Co., that company receiving a subsidy from the government. The Dominion government also agreed to transfer to the company the Pictou Branch road, from Truro to Pictou, 51 miles, but the transfer has not yet been made.

East Tennessee, Virginia & Georgia.—This company, according to local papers, has been offering to let contracts for a branch from its Macon & Brunswick Division at Buffalo Swamp, Ga., to a connection with the Florida Transit road at Hart's Road, Fla. So far, however, no contractors have been found to take the contracts at the prices which the company is willing to pay.

Fredericton.—This road has been sold to the New Brunswick Railway Co. for $150,000. It extends from Fredericton Junction, on the St. John & Maine road, northward 22½ miles to Fredericton, the capital of the province of New Brunswick. It was owned by a separate company, but was really a branch of the St. John & Maine, and its purchase naturally follows the lease of that road. The road has a funded debt of $100,000, making its total cost $250,000, or a little over $11,100 a mile.

Galveston, Sabine & St. Louis.—Track is reported laid on this road from the junction with the Texas & Pacific at Wilkins, Tex., 40 miles west of Marshall, south to Waldron Mills, 3 miles. It is a lumber road, and will be extended southward for some miles further.

Jacksonville Southeastern.—On the extension of this road track is reported laid to Centralia, Ill., the junction of the Chicago and North divisions of the Illinois Central road, which is 29 miles southeast from the late terminus at Smithboro, and 112 miles from the northern terminus at Jacksonville. Trains will soon run to the new terminus.

Kingston, Warwick & Easton.—This company has been organized to build a railroad from Montgomery, N. Y., the southern terminus of the Wallkill Valley road, to Greycourt, to connect with the Lehigh & Hudson River road. It will be an extension of the Wallkill Valley road, which is now owned by the New York, West Shore & Buffalo Co., and that company controls the new organization.

Lackawanna & Pittsburgh.—On this new road there is one of the highest bridges in the country. This bridge is over Stony Brook Glen, 4 miles south of Dansville, N. Y., and will be 700 ft. long and 236 ft. high from the brook below to the rails. Work is progressing on this bridge.

Louisville & Nashville.—Messrs. Jay Gould and Russell Sage were chosen directors of this company at the annual meeting this week. It has been understood that they would enter the board, and it is stated that their election does not mean any change in management, but only closer relations between this company and Mr. Gould's Missouri Pacific system.

Maine Central.—It is stated that President Lord, of the Boston & Maine, in receiving the proposition of the Maine Central committee for a lease of their road, said that the communication would receive proper attention, but that he could not promise the appointment of a conference committee as asked for. No definite action will be taken probably until after the Boston & Maine directors have had a meeting, but it is understood that the Maine Central committee will shortly call a meeting of the stockholders to ask for instructions as to a further continuance of the negotiations.

Manhattan.—The following notice has been published by Mr. Jay Gould in relation to the dividend lately declared:

"I have arranged with the Mercantile Trust Co. to purchase from the first preferred stockholders of the Manhattan Railway Co., in whose favor a dividend was declared, payable on the 1st prox., their claims to said dividends upon their assignment to me of such claims, accompanied by an assignment of their claims to a dividend from the New York Elevated Railroad Co. for like amount, in case the merger agreement between the three elevated railway companies should be adjudged invalid."

Mexican Railroad Notes.—The following notes are from the *Mexican Financier* of Sept. 8:

Preparations are going on actively at Nuevo Maredo for the beginning of the Mexican Meridional, or Gould-Grant railway.

They are constructing warehouses at the port of Pescadería to receive material for the Tamaulipas International or Telefener railway.

At last accounts the track of the Matamoros & Monterey line of the Mexican National was completed to Mesa station, 48 kilometers from Matamoros.

On the Northern Division of the Mexican Central they have lately been laying an average of three miles of track a day. On the Southern Division track-laying is actively progressing and is now well on the way from Encarnacion to Aguascalientes, so that that city will probably be reached by Sept. 20, at the latest.

Track-laying towards Morelia has again begun on the Mexican National, and there being only 14 kilometers to lay, the work will be finished in a few days, so that the beautiful capital of Michoacan, the garden state of Mexico, will be able to have its railway jubilee on Sept. 16, the great national holiday. The Patzcuaro railway trouble appears to have been amicably settled.

The government inspector for the Northern Division of the Mexican National, Mr. Leopoldo Zamora, reports that on Aug. 21 the grading was finished 12 kilometers south of Villa Lerdo and the track was laid 785 kilometers south from El Paso. By Sept. 15 the road would be in operation to Villa Lerdo, a total length of 727 kilometers, or a little over 453 miles.

The inspector for the Manzanillo section of the Mexican National reports that the road is completed and in operation between Manzanillo and Armeria, a distance of 46 kilometers, reaching an altitude of 27 meters. The most notable work is the cut in the Cerro de Manzanillo, 26 meters deep. The rails are of steel, 40 pounds to the yard, and the sleepers are of pine. The rolling-stock consist of 6 locomotives, two first-class passenger coaches, 50 platform cars, 25 box-cars, and 50 gravel cars. The line has been located and approved as far as kilometer 100, and the preliminary surveys have been made as far as kilometer 160.

Michigan Central.—A dispatch from Lockport, N. Y., Sept. 30, says of the work on the new bridge over the Niagara River on this company's Canada Southern Division: "Interesting details are furnished of the progress of the work on the Michigan Central cantilever bridge across the Niagara. During the past week large additions have been made to the scaffoldings, or false work, on the American side, and these huge structures are described by those connected with the works as more cumbrous than the complete bridge will be. They are 220 ft. above the water. The same additions are in progress to the Canadian scaffolding. The great labor of building the shore-arms has been commenced. The heavy caps for the steel tower are being placed in position. The labor of moving these ponderous pieces, and, in fact, all of the steel parts belonging to the towers is an immense one. There are four of these caps for each tower, and each one holds an arm of the cantilever. These caps are stated to be the largest steel castings ever made in this country. They were were cast in the Cambria Iron Works Johnstown, Pa. Each one weighs more than two tons Their adjustment will be completed on Monday. No doubts are entertained by those qualified to judge of the progress of the work that the bridge will be ready for the passage of trains by Dec. 1, according to contract."

Milwaukee, Lake Shore & Western.—This road is now completed to Bass Lake, Mich., 18 miles north of the Wisconsin border. The new station is 39 miles north of the late terminus at Eagle River, Wis., and 305 miles from Milwaukee. The right of way is now cut out for 15 miles beyond Bass Lake and within four miles of Lake Agogebic, and grading is in progress.

Missouri Pacific.—From Oct. 1 the passenger fares on the St. Louis, Iron Mountain & Southern Division of this company's lines are reduced to a uniform rate of 3 cents per mile. The rates have been heretofore 4 cents per mile in Missouri and 5 cents in Arkansas.

Montreal, Portland & Boston.—It is said that the Canadian Pacific Co. will certainly purchase this road, whether it buys the Southeastern Railway, of Canada, or not. The road will be needed as a connection with the St. Johnsbury & Lake Champlain, if it is used in no other way. It has been worked in connection with the Southeastern, and, like that road, is chiefly owned by Bradley Barlow, and is part of the property upon which his creditors base their hopes of securing their claims.

New Brunswick.—This company has bought the Fredericton Railway, a branch of the St. John & Maine, as noted more fully elsewhere, adding 22½ miles of road to its lines by the purchase.

New York, Chicago & St. Louis.—A Philadelphia dispatch says: "The control of the Nickel Plate Railroad, which was supposed to have been acquired by the Vanderbilts through their purchase of $26,000,000 of the stock, is about to be contested by the holders of the first mortgage bonds in Pennsylvania and elsewhere. It has become apparent that these bonds possess equal voting powers with the stock (a fact not previously developed), and as there are outstanding $15,000,000 of bonds and $24,000,000 of stock, which Vanderbilt does not control, his purchase of $26,000,000 of stock only has apparently failed to secure the control of the road. Preparations are being made by the bondholders to nominate and elect at the next annual meeting a board of directors representing interests adverse to the Vanderbilts."

Another statement is that, while it is true that the bondholders are entitled to votes, they can only vote when their bonds are properly registered; that many of the bonds are held by persons favorable to the Vanderbilt control, and that in any event only one-third of the board is elected at the annual meeting, and that no change in the management could be made this year.

New York City & Northern.—This company has been in the hands of a receiver since May, 1882. Proceedings for the sequestration of its property and franchises are now pending, based on judgments obtained against it by the New York Loan & Improvment Co., Henry Villard and others for money loaned to it and for unpaid interest on bonds. The Mercantile Trust Co. is the trustee of a consolidated mortgage given in 1880 for $4,000,000. The Trust Co. has begun a suit in equity in the Supreme Court to have the mortgage declared the first lien on the company's franchises, property, etc., and for its foreclosure.

New York, Lake Erie & Western.—In the suit brought by certain parties to set aside the lease of the New York, Pennsylvania & Ohio road to this Company, the United States Circuit Court in Cleveland, O., has sustained a demurrer filed by the defendants, with leave to plaintiffs to file an amended bill. The Court refused an order asked for to appoint a receiver, holding that there was nothing to show that the road was not properly managed, or that plaintiff's interests would suffer by a continuance of the present management pending the litigation.

The blacksmith shop, bolt shop and sand house, frame building, in the yard at Port Jervis, N. Y., were destroyed by fire on the night of Sept. 25, with the machinery in them. The loss is estimated at $25,000 only.

The grading on the new Erie & Wyoming Valley Branch is now nearly completed. It is said that it will be prepared for a double track, but that the second track will be laid only in spots to serve for sidings at present. It is not expected that track will be laid before the early spring. The heaviest work on the grading is near Scranton, Pa., on the contracts of Stevens & Pace and Ames & Westcott.

Norfolk & Western.—This company makes the following statement for August and the eight months ending Aug. 31:

	August.		Eight months.	
	1883.	1882.	1883.	1882.
Earnings	$261,711	$222,161	$1,690,334	$1,438,655
Expenses	122,878	106,540	952,592	833,832
Net earnings	$138,833	$115,621	$737,742	$604,823

For the eight months there was an increase of $251,679, or 17.5 per cent., in gross earnings, with an increase of $118,760, or 14.2 per cent., in expenses, the result being a gain of $132,919, or 22.0 per cent., in net earnings.

The New River Division (75 miles) was opened to the coal fields on May 21. The earnings and expenses for the month of August, as given above, embrace, therefore, the entire line, including the New River Division.

Northeastern, of Georgia.—A number of judgments have recently been entered against this company for damages for personal injuries received in an accident to an excursion train on the road last spring. In defence against these judgments the company pleaded that it was insolvent, and that the road was mortgaged for more than its value. The holders of the judgments then proceeded to attach personal property and money, and to serve garnishments upon all who owed the road money, and upon the conductors, ticket agents and others who received money for its account. In order to avoid the vexations arising from these proceedings, application was made for the appointment of a receiver, and the Court granted an order placing the road in the hands of Mr. Augustus Hall as Receiver.

The road is completed from Athens, Ga., to Lula, 39 miles, and from Rabun Gap Junction to Tallulah Falls, 21 miles, its trains using the Atlanta & Charlotte Air Line from Lula to the junction, 12 miles. It was bought last year by the Richmond & West Point Terminal Co., which built the extension to Tallulah Falls.

Northern Pacific.—On the Puget Sound Shore Line Branch the track is now laid from the junction with the Carbonado Branch 10 miles from Tacoma, Wash. Ter., northward to Black River, 21 miles. At Black River the line intersects the Columbia & Puget Sound road, about 10 miles from Seattle. It was at first said that this road (which is of 3 ft. gauge) would be used from the junction to Seattle, but contracts have now been let on the grading to that city, so that an independent line seems to be intended.

Ohio Central.—Since default was made on the interest on the River Division bonds there has been a strong feeling against the present management of the company among the bondholders. A number of them proposed to organize and assert their rights, and it was proposed by some of them to apply to the courts for the appointment of a receiver. Apparently it was deemed best by the management to forestall this action, and application was accordingly made by a person friendly to them to the Court of Common Pleas of Lucas County, O., on Sept. 28. The court granted the application and appointed as Receiver Mr. John E. Martin, Vice-President and General Manager of the road, who at once took possession. There is considerable feeling among the bondholders in New York at this action, and there is talk of applying to the Court for the appointment as Receiver of some other person who would represent the bondholders' interest. It is, probable that some action will be taken as soon as dissatisfied bondholders can organize.

Oregon Railway & Navigation Co.—The Mountain Division, or Baker City Branch, is now completed to Meacham, Oregon, 28 miles beyond the late terminus at Mikecha and 93 miles southeast from the River Division at Umatilla Junction. The new terminus is 280 miles from Portland.

Pennsylvania.—The Pittsburgh *Telegraph* of Sept. 27 says: "The appointment of Assistant Engineer Trump to the position of Assistant Superintendent of the Pittsburgh Division of the Pennsylvania Railroad signifies the pushing forward to completion of a number of contemplated improvements. The work of grading for a new freight yard at the new junction with the West Penn at Bolivar has been commenced. Three miles of sidings will be built. The first passenger train over the remodeled West Penn road was run from Freeport to Blairsville on Monday. The building of third tracks at Rodebaugh, Minerva, Sang Hollow, Mineral Point and Sonman, 2½ miles, are nearing completion. The remodeling of the Pittsburgh yards will be completed by next spring. The Panhandle yard will then be entirely on the south side of the present tracks, and the crossings will be directly under the new Seventeenth street inclined plane. The greatest improvement the Pennsylvania Railroad contemplates at the present time is an increase of facilities at the East Liberty stock yards. At present the sidings run in only at the east end of the yards, but the new plans contemplate a double track, commencing at Station street and running completely around the yards. This will give a length of 1,460 ft. each. Four independent branches, 290, 450, 500 and 520 ft. long, will diverge into different portions of the yard. A remodeling of the yard is also contemplated. A hay house 260 by 40 ft., and other buildings, including a freight station, are down on the plans, and when built they will front on a proposed street, which will parallel the railroad from Station street to the yards."

People's Railway, of America.—This stupendous project, of which mention has heretofore been made, does not seem to be in favor in Chicago. An agent, after spending a month in that city, only succeeded in getting subscriptions for 2,600 shares of $50 each, and it is said that the first installment of $2.50 per share has been paid in very few cases. A meeting to organize was held last week, but only a few attended and nothing was done.

Philadelphia & Reading.—This company's statement gives the following figures for August and the nine months of the fiscal year from Dec. 1 to Aug. 21, the earnings and expenses of the Railroad Co. as given including those of the leased Central Railroad, of New Jersey, from the date of the lease, June 1, 1883:

	August.		Nine months.	
	1883.	1882.	1883.	1882.
Railroad Co.:				
Earnings	$3,538,033	$1,975,993	$19,278,361	$15,384,837
Expenses	1,619,001	1,025,908	10,454,003	8,754,570
Net earn.	$1,918,942	$950,085	$8,824,358	$6,630,267
Coal & Iron Co.:				
Earnings	$1,866,105	$1,615,208	$11,547,488	$10,690,721
Expenses	1,732,468	1,393,994	11,263,695	10,029,767
Net earn.	$133,637	$221,214	$283,793	$660,954
Both Cos.:				
Earnings	$5,404,138	$3,591,201	$30,825,849	$26,075,558
Expenses	3,351,559	2,419,902	21,717,698	18,784,337
Net earn.	$2,052,579	$1,171,299	$9,108,151	$7,291,221

The Railroad Co. shows for the nine months an increase of $3,893,524, or 25.3 per cent., in gross earnings; an increase of $1,699,433, or 19.4 per cent., in expenses, and an increase of $2,194,091, or 33.1 per cent. in net earnings. Of this net increase the net earnings of the New Jersey Central for June, July and August made $1,640,997, showing for the Reading lines proper an increase in net earnings of $553,094, or 8.3 per cent.

The Coal & Iron Co. shows for the nine months an increase of $856,767, or 8.0 per cent., in gross receipts, with an increase of $1,233,928, or 12.3 per cent., in expenses, the result being a decrease in net earnings of $377,161, or 57.1 per cent. The net earnings of this company for this year have been only 2.46 per cent. of the gross receipts.

Thus for the nine months both companies together show a gain of $4,750,291, or 18.2 per cent., in gross earnings, with an increase of $2,933,361, or 15.6 per cent., in expenses, the result being a gain in net earnings of $1,816,930, or 24.9 per cent. If the Central net earnings for the three months since the lease be deducted, there is left, as the net increase for the two Reading companies, $175,933, or 2.4 per cent.

In these statements no charge for interest or rentals is included in expenses, the net earnings being the amount from which those charges are to be paid.

The earnings of the Reading and Central lines for August are given separately as follows:

	Reading.	Central.	Total.
Gross earnings	$2,281,698	$1,256,335	$3,538,033
Expenses	1,053,880	565,211	1,619,091
Net earnings	$1,227,818	$691,124	$1,918,942
Central rental for month		452,043	452,043
Balance		$239,081	$1,466,899

The Central surplus over rental, as reported, was $26,413 in June and $80,351 in July, making a total of $345,845 for the three months since the lease, being the three months of the year in which the Central road might be expected to make the best showing. Dividends on the Central stock did not begin until Sept. 1 to be included in the rental; the September statement should therefore show an increase in the rental charged.

The sources of the income of the Railroad Co. in August were as follows:

	Earnings.	Expenses.	Profit or loss.
Railroad traffic	$3,363,221	$1,523,259	P. $1,839,962
Canal traffic	124,361	57,419	P. 66,942
Steam colliers	43,732	31,763	P. 11,969
Richmond coal barges	6,719	6,650	P. 69
Total	$3,538,033	$1,619,091	P. $1,918,942

The gain this year has been entirely in the railroad traffic, the net earnings from canal traffic and from the steam colliers showing a considerable decrease.

The report of traffic and of coal mined is as follows:

	August.		Nine months.	
	1883.	1882.	1883.	1882.
Passengers carried	2,484,450	1,077,039	12,155,552	8,664,491
Tons merchandise	902,166	665,177	5,811,702	5,587,477
Tons coal	1,372,828	819,511	7,431,633	5,914,172
Tons coal on colliers	47,648	50,189	388,999	419,608
Tons coal mined:				
By Coal & Iron Co.	501,211	416,406	3,045,090	2,833,045
By tenants	145,059	150,026	1,077,094	1,075,328
Total	646,270	566,432	4,122,184	3,908,373

The increase in traffic comes, of course, largely from the Central lines, which were not included last year. The increase in merchandise tonnage is less than might have been expected.

In relation to a scrip dividend to the stockholders, of which there has been much talk lately, President Gowen states that it will be the policy of the company to distribute any surplus earnings of the company among the shareholders, but that the question of making a dividend in scrip or cash will not be fully considered by the directors until January.

Pittsburgh, Bradford & Buffalo.—This company has been consolidated with the Pittsburgh & Western. The company was a consolidation of several small companies, and owned a narrow-gauge line from Foxburg to Kane, 82 miles, with 12 miles of branches. The terms of the consolidation are not stated.

Pittsburgh, Fort Wayne & Chicago.—The Philadelphia *North American* says: "At the next meeting of the Pittsburgh, Fort Wayne & Chicago's directors a proposition will be submitted by which the 7 per cent. stock guarantee by the Pennsylvania Company as lessee of the former will be made exchangeable for 7 per cent. mortgage bonds guaranteed by the lessee to an equal amount, and to run 499 years, or until the termination of the lease."

Pittsburgh & Western.—This company has acquired by consolidation the Pittsburgh, Bradford & Buffalo road, including the narrow-gauge line from Foxburg, Pa., to Kane and its branches, 94 miles in all.

Reports have been current that various parties are trying to buy a controlling interest in the stock of this company. The parties named are the Baltimore & Ohio, the South Pennsylvania or Vanderbilt line, and an unknown New York syndicate. A majority of the stock is owned by a few parties in Pittsburgh, who, it is said, have agreed not to sell. The stock outstanding is $6,000,000, and the company has $4,000,000 bonds out, besides $225,000 underlying first-mortgage bonds on the original road.

It is altogether probable that all this talk has been started in order to make some market for the stock. Probably any one who really wanted to buy a controlling interest would have no trouble in getting all the stock he wanted. The company's property is made up of several lines of no especial value, most of them so situated as to meet with close competition, and the only part of it which could not be readily duplicated is the entrance into Allegheny City. If it is true, as reported in Pittsburgh, that the road is earning about 80 per cent. of its working expenses, and that the floating debt is over $750,000, the stockholders should be very willing to turn over the road to any one who wanted it. Perhaps those reports are somewhat exaggerated, but probably not more so than is the reported anxiety of somebody to control the road.

Portland & Ogdensburg.—Negotiations are in progress for the sale of the controlling interest in this road, now held by the city of Portland, Me., to the representatives of the Canadian Pacific Co. The negotiations are in charge of a committee of the City Council. It is said that the general feeling is in favor of a lease of the road rather than an absolute sale of the city's interest. Two other propositions for the purchase of the road have been received.

Richmond & Danville.—It is announced that the October interest on the debenture bonds will not be paid, the board having decided that there are no net earnings properly applicable to the payment. The issue of these bonds is $4,000,000, and they bear 6 per cent. interest, payable if earned, but the interest is cumulative; that is, any deficiency in payment is a claim upon future earnings which must be paid before dividends can be declared on the stock. In relation to the passing of interest the following circular has been issued by the board:

"By the terms of the debenture bonds it became the duty of the board of directors of this company to ascertain, within 60 days after Sept. 30, 1882, whether the net earnings for the fiscal year terminating on that date, exclusive of expenditures made for repairs, renewals, and improvements of existing property, as well as for purchases or construction of additional property and equipment necessary for the proper conduct of its business, were sufficient for the payment of a sum not exceeding 6 per cent. per annum on the debenture bonds. That board having omitted to perform this duty, it devolves upon this board to determine whether the company has realized a sufficient sum, in excess of such improvements, to authorize the board to declare a dividend to the debenture bondholders on Oct. 1, 1883.

The net earnings for the year ending Sept. 30, 1882, as shown by the annual report, were	$1,298,035
Deducting fixed charges	1,219,169
Leaving balance	$78,866
There was expended for new equipment and betterments	$922,848
Dividend to debenture bondholders, Oct, 1, 1882	98,760
Total	$1,021,608

"Which was provided out of profits on sales of securities owned by the company, and through the increase of its floating debt. It thus appears, from the foregoing statement, that the net earnings of the company having been expended in providing additional new equipment and betterments, as authorized by the terms of the debenture bonds, they should not, therefore, have been applied to the payment of dividends on these bonds. For the information of stock and bond holders of this company it is proper to state that the ascertained net earnings for eleven months of the present fiscal year, over operating expenses and fixed charges, have been $307,801; estimated net earnings for September, $72,739; total, $380,540.

"The expenditures for eleven months for additional new equipment and betterments have amounted to $402,091. The gratifying increase in the company's business and earnings, and the improved condition of its roads, and the determination of this board to materially reduce the expenses of its operation and administration, warrant it in expressing the opinion that the net results of the company's business for the coming year will be eminently satisfactory to all holders of its securities."

St. Paul, Minneapolis & Manitoba.—Track is reported laid on the Moorhead Northern Branch, from Moorhead, Minn., northward to Holstad, 35 miles. The stations are Kragness; Georgetown, at the crossing of Buffalo River; Lee; Hendrum, at the crossing of the Wild Rice River; and Holstad. The branch runs down the eastern or Minnesota side of the Red River; it is close to the river, and about halfway between the company's St. Vincent line on the east and the Fargo-Grand Forks line on the west.

Saugatuck & Aspetuck Valley.—It is stated that the New York, New Haven & Hartford Co. has agreed to build and operate this road from Westport, Conn., up the Saugatuck Valley to Redding, about 20 miles, provided the people on the line will raise enough to grade the road, pay for the right of way and build the stations.

South Pennsylvania.—This company has filed a certificate in the State Department at Harrisburgh, Pa., fixing the capital stock at $20,000,000 and the issue of mortgage bonds at $20,000,000 also.

Syracuse, Ontario & New York.—This company has issued the following circular: "This company having by purchase acquired the Syracuse, Chenango & New York Railroad, extending from Syracuse, N. Y., to Earlville, in the same state, will, on and after Sept. 1, operate it under the name as reorganized. All accounts, ticket balances, car service, etc., covering business to Aug. 31, should be promptly settled with F. W. Barker, Treasurer for Receiver the Syracuse, Chenango & New York Railroad, Syracuse, N. Y. Accounts for business originating on this date and hereafter should be drawn in the name of the Syracuse, Ontario & New York Railway Co., and ticket reports, car service notices, etc., should be rendered to the undersigned. The cars of the company are marked 'S., C. & N. Y. R. R.' and 'S., O. & N. Y. Ry.,' and are all being changed to the latter initials as rapidly as possible. All remittances in favor of this company should be made to F. E. Worcester, Treasurer, 15 Broad street, New York."

Toledo, Cincinnati & St. Louis.—A meeting of bondholders was held in Boston, Sept. 27, which was largely attended. There was a pretty sharp discussion over the affairs of the company and some decided differences of opinion were developed. The following committee was appointed to confer with the bondholders: Iron road, B. F. Guild and C. R. Batt; Southeastern Division, J. M. Prendergast and W. W. Blackmar; Cincinnati Northern, John Felt Osgood and W. D. Hobbs; Dayton Division, A. A. Pope, D. H. Darling; St. Louis Division, E. B. Phillips, R. B. Fuller; Delphos Trust, Edwin Morey, Charles W. Pierce; main line, H. H. Mawhenny, D. H. Sweetser; terminal trust, S. A. Strong, E. C. Soule; car trust, Henry D. Hyde, Willard White; debenture bonds, G. W. Norse, N. B. Mansfield; junior securities, Arthur Sewall, C. A. Rodgers; Cincinnati Division, John McNab, G. C. Mores. Messrs. Albert Netter and John Ryan were afterwards added to this committee, for the Cincinnati Northern. A resolution was adopted in favor of collecting the balance due on the subscriptions to the debenture bonds.

After the adjournment of the meeting, the Committee elected Mr. John Felt Osgood Chairman, and A. A. Pope Secretary.

A dispatch from Toledo, Sept. 29, says: "The questions growing out of the appointment of a Receiver for the Toledo, Cincinnati & St. Louis Railroad were argued to-day before Judges Baxter and Drummond, of the United States Circuit Court, and upon the hearing an order was issued discharging the Receiver and remanding the property to the company. The Receiver will hold the property until Oct. 12, in order that the company may prepare to take possession."

This action leaves all the questions relating to the embarrassments of the company open again. The trustees under the different mortgages will now be at liberty to take such action as may seem necessary or expedient.

Vermont & Canada.—A dispatch from St. Albans, Vt., Oct. 1, says: "A petition in chancery has been filed in the Franklin County Court, before Chancellor Royce, praying that the Langdon suit against the Vermont Central Railroad may be discontinued and the receivership terminated. It will be remembered that in this suit the court adjudged that the trust debt, so called, created under the receivership held by the Central Vermont Co. against the old Vermont Central and Vermont & Canada roads, is a first lien on the property and earnings, underlying the first-mortgage bonds of the Vermont Central and the claim for rental of the Vermont & Canada. The Vermont & Canada people aver that the plan of settlement agreed to by them, in which they are to receive bonds of the new Consolidated Railroad Co. of Vermont in exchange for their stock, will be inoperative until this suit is withdrawn and the receivership terminated, as, although the Consolidated Co. has secured a nominal title to the property by foreclosure of the mortgages, it has not entered upon possession, and cannot while the roads are in the hands of a receiver. The Court is now in session, but as chancery cases are usually heard near the end of the term, it is doubtful when a hearing will be given upon this petition, and it is also asserted that Mr. Langdon, in whose name the famous suit was brought, and who is Vice-President of the Central Vermont Company, the present Receiver of the roads, will insist upon his rights under the decision, in which case the Vermont & Canada people say they will have no security for their bonds."

Western Union Telegraph.—The New York Court of Appeals has given its decision in the suits of Wm. S. Williams and Rufus Hatch against this company. The decision reverses that of the Superior Court given at General Term and confirms the previous one at Special Term, the Court of Appeals dismissing the injunction granted in the suits and holding in effect that the purchase or consolidation of the American and Mutual Union Telegraph companies was legal, and that the issue of $15,500,000 new stock made at the time of the consolidation was also legal. This decision, we suppose, is final and establishes the legality of the entire $80,000,000 of stock issued by the company.

West Jersey.—This company makes the following statement for August and the eight months ending Aug. 31:

	August.		Eight months.	
	1883.	1882.	1883	1882.
Earnings	$215,986	$199,246	$871,988	$778,902
Expenses	96,446	89,950	500,454	413,805
Net earnings	$119,540	$109,296	$371,534	$365,097

For the eight months there was an increase of $93,086, or 11.8 per cent., in gross earnings, with an increase of $86,649, or 20.9 per cent., in expenses, the result being an increase of $6,437, or 1.8 per cent., in net earnings. August is usually the heaviest month of the year on this road.

Williamstown.—Work is in progress on the extension of this road from Williamstown, N. J., eastward to the West Jersey road at Glassboro, a distance of 7 miles. This extension will make the road 16 miles long, from Glassboro on the West Jersey road to Atco on the Camden & Atlantic. The extension was graded about the time the road was first built from Atco to Williamstown.